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MASSACHUSETTS
AGRICULTURAL EXPERIMENT
STATION.

A Summary of Meteorological
Observations

BY

J. E. OSTRANDER

This bulletin gives summaries of the meteorological observations made at this station for the twenty-year period, 1889 to 1908. It includes also records of such available and at the same time apparently reliable precipitation and temperature records as were made in Amherst previous to 1889. Most of these records were made by the late Professor E. S. Snell of Amherst College and his daughters (1836-1883), while others were made in the old State Experiment Station of which Dr. C. A. Goessmann was Director. (1883-1888).

Requests for bulletins should be addressed to the
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AMHERST, MASS.

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LOCATION AND EQUIPMENT.

The meteorological observatory is located in the tower at the southeast corner of South College at an elevation of about 50 feet above the ground. It was equipped with a number of Draper self-recording instruments and the records date from Jan. 1, 1889. The location is on a gravel ridge with an open exposure to the north, west and southwest, with slightly higher ground about a mile to the south and a ridge considerably higher about half a mile to the east.

The top of the tower is 72 feet above ground, and the exposure is good in all directions. The anemometer, anemoscope, wind pressure instrument and electrical sunshine recorder are mounted from 3 to 5 feet above the top of the tower and the recording apparatus is in the room below. The thermometer shelter and rain gauges are on the campus about 300 feet southwest from the tower and on slightly lower ground.

The observatory is in latitude $42^{\circ} 23' 48.5''$ N., longitude $72^{\circ} 31' 10''$ W., and the base of the tower is 223 feet above mean low water, Boston harbor, as determined by levels connecting with those of the Boston and Maine railroad. The standard barometer is of U. S. Weather Bureau pattern, reading to 1/500th of an inch, and the cistern is $273\frac{1}{2}$ feet above sea level. The Draper self-recording barometer is mounted one foot higher.

The sunshine recorder of the Draper pattern was replaced by an electrical one from Friez in 1906, and the Draper anemometer by one of U. S. Weather Bureau pattern, at about the same time. The records are received on a triple register, which also records the rainfall. The rain gauges are about two feet above ground and 218 feet above sea level. A U. S. Weather Bureau gauge is used in determining the precipitation, and the tipping bucket electrical recording gauge in determining the time and rate.

The Draper self-registering thermometer, Weather Bureau pattern, maximum and minimum thermometers and hygrometer are in a standard shelter about four feet above ground and 220 feet above sea level.

On Jan. 1, 1904, the time of making observations was changed from 7 A. M., 2 P. M. and 9 P. M., to 8 A. M. and 8 P. M., so as to conform with the practice of the U. S. Weather Bureau. This change should be noted in comparing the dew point and relative humidity before and after that date. Other data are probably not affected by the change.

Mean Barometer.

(Readings are reduced to freezing and sea level.)

| YEAR. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Mean Annual. |
|--------|----------|-----------|--------|--------|-------|-------|-------|---------|------------|----------|-----------|-----------|--------------|
| 1889.. | 30.11 | 30.24 | 29.84 | 29.80 | 29.92 | 29.96 | 29.91 | 30.01 | 30.00 | 30.05 | 30.04 | 30.14 | 30.00 |
| 1890.. | 30.19 | 30.10 | 29.99 | 30.10 | 29.96 | 29.98 | 30.02 | 30.00 | 30.12 | 29.88 | 30.01 | 30.01 | 30.03 |
| 1891.. | 29.96 | 30.04 | 30.10 | 29.92 | 29.98 | 29.92 | 29.99 | 29.96 | 30.11 | 30.03 | 30.12 | 30.08 | 30.02 |
| 1892.. | 29.96 | 30.11 | 29.90 | 29.97 | 29.94 | 29.92 | 29.99 | 30.02 | 30.10 | 29.90 | 29.99 | 30.01 | 29.98 |
| 1893.. | 29.95 | 30.11 | 30.06 | 30.09 | 29.90 | 30.06 | 29.97 | 30.00 | 30.06 | 30.13 | 30.12 | 30.12 | 30.05 |
| 1894.. | 30.18 | 30.16 | 30.09 | 30.05 | 30.00 | 30.00 | 30.01 | 30.03 | 30.14 | 30.02 | 30.08 | 30.15 | 30.08 |
| 1895.. | 30.05 | 29.92 | 30.00 | 30.12 | 30.10 | 30.17 | 30.03 | 30.02 | 30.10 | 30.08 | 30.19 | 30.15 | 30.08 |
| 1896.. | 30.16 | 29.86 | 29.99 | 30.14 | 29.98 | 29.95 | 29.97 | 29.99 | 30.00 | 30.01 | 30.14 | 30.14 | 30.03 |
| 1897.. | 30.04 | 30.06 | 30.04 | 30.04 | 29.92 | 29.90 | 29.94 | 29.94 | 30.09 | 30.12 | 30.03 | 30.04 | 30.01 |
| 1898.. | 29.98 | 30.05 | 30.20 | 29.93 | 29.94 | 29.95 | 30.02 | 29.96 | 30.01 | 30.09 | 30.01 | 29.96 | 30.01 |
| 1899.. | 30.11 | 29.98 | 29.94 | 30.04 | 30.00 | 29.98 | 29.93 | 29.98 | 30.02 | 30.19 | 30.01 | 30.03 | 30.02 |
| 1900.. | 30.03 | 29.97 | 29.95 | 29.96 | 29.91 | 29.91 | 29.91 | 29.99 | 30.04 | 30.15 | 29.99 | 30.03 | 29.98 |
| 1901.. | 29.95 | 29.79 | 29.90 | 29.97 | 29.88 | 29.95 | 29.93 | 30.02 | 30.03 | 30.08 | 29.93 | 30.03 | 29.96 |
| 1902.. | 30.04 | 29.78 | 29.91 | 29.88 | 29.84 | 29.84 | 29.96 | 29.92 | 30.04 | 30.03 | 30.06 | 30.06 | 29.95 |
| 1903.. | 29.91 | 29.98 | 30.20 | 29.87 | 29.94 | 29.94 | 29.88 | 30.00 | 30.10 | 30.00 | 30.01 | 29.97 | 30.00 |
| 1904.. | 30.08 | 30.11 | 30.11 | 29.97 | 30.02 | 30.02 | 29.98 | 30.03 | 30.08 | 30.08 | 29.95 | 30.02 | 30.03 |
| 1905.. | 30.08 | 30.12 | 30.12 | 29.85 | 29.93 | 29.93 | 29.95 | 29.98 | 30.05 | 30.10 | 30.01 | 30.08 | 29.94 |
| 1906.. | 30.09 | 30.20 | 30.09 | 29.98 | 29.94 | 29.94 | 29.98 | 30.02 | 30.09 | 30.09 | 30.04 | 30.12 | 30.05 |
| 1907.. | 30.23 | 30.09 | 30.08 | 29.88 | 29.93 | 29.93 | 29.87 | 30.00 | 30.02 | 30.05 | 30.05 | 30.02 | 30.02 |
| 1908.. | 29.97 | 30.08 | 30.10 | 29.92 | 30.03 | 30.03 | 30.04 | 30.03 | 30.10 | 30.17 | 30.01 | 30.04 | 30.04 |
| Mean. | 30.05 | 30.04 | 30.03 | 29.97 | 29.95 | 29.96 | 29.97 | 30.00 | 30.07 | 30.06 | 30.04 | 30.06 | 30.01 |

Range of Barometer (in inches).

| YEAR. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Annual Range. |
|--------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|---------------|
| 1889.. | 1.62 | 1.51 | 1.58 | 1.16 | .75 | .97 | .68 | .66 | .98 | .96 | 1.31 | 1.75 | 1.81 |
| 1890.. | 1.50 | 1.35 | 1.08 | 1.08 | .81 | .58 | .63 | 1.10 | .69 | 1.09 | .98 | 1.20 | 1.76 |
| 1891.. | 1.93 | 1.36 | 1.21 | 1.42 | .79 | .53 | .74 | .61 | .73 | 1.11 | 1.56 | 1.22 | 2.05 |
| 1892.. | 1.38 | 1.65 | 1.16 | 1.02 | .96 | .84 | .97 | .55 | .96 | .98 | 1.00 | 1.01 | 1.65 |
| 1893.. | 1.53 | 1.83 | 1.27 | 1.25 | 1.16 | .67 | .68 | .93 | .81 | 1.37 | 1.16 | 1.53 | 1.92 |
| 1894.. | 1.89 | 1.65 | 1.04 | .86 | .93 | .75 | .57 | .44 | 1.11 | 1.19 | 1.22 | 1.23 | 2.01 |
| 1895.. | 1.46 | 1.88 | 1.24 | 1.40 | .84 | .66 | .51 | .53 | .68 | 1.09 | 1.47 | 1.78 | 2.27 |
| 1896.. | .97 | 1.77 | 1.52 | .96 | .75 | .83 | .79 | .59 | .85 | 1.10 | 1.23 | 1.57 | 2.22 |
| 1897.. | 1.57 | 1.15 | 1.74 | 1.10 | .76 | .55 | .72 | .61 | .73 | 1.12 | 1.48 | 1.42 | 1.76 |
| 1898.. | 1.43 | 1.63 | 1.17 | .86 | .76 | .95 | .81 | .60 | .82 | 1.19 | 1.25 | 1.39 | 1.75 |
| 1899.. | 1.70 | 1.41 | 1.54 | .90 | .60 | .59 | .51 | .56 | .88 | .76 | 1.10 | 1.58 | 1.82 |
| 1900.. | 1.58 | 1.89 | 1.52 | 1.01 | .99 | .67 | .73 | .53 | 1.03 | 1.07 | 1.71 | 1.53 | 1.89 |
| 1901.. | 1.68 | .97 | 1.17 | 1.19 | .77 | .61 | .59 | .51 | 1.00 | 1.22 | 1.14 | 1.13 | 1.68 |
| 1902.. | 1.49 | 1.41 | 1.55 | 1.04 | .94 | 1.27 | .58 | .67 | .78 | 1.25 | 1.12 | 1.34 | 1.89 |
| 1903.. | 1.49 | 1.55 | 1.19 | 1.15 | .85 | .97 | .57 | .77 | .78 | 1.08 | 1.32 | 1.56 | 1.77 |
| 1904.. | 1.50 | 1.36 | 1.58 | 1.00 | .75 | .81 | .73 | .73 | 1.20 | 1.23 | 1.84 | 1.43 | 2.23 |
| 1905.. | 1.37 | 1.28 | .89 | 1.15 | .85 | .83 | .58 | .72 | .66 | 1.16 | 1.22 | 1.53 | 1.64 |
| 1906.. | 1.53 | 1.28 | 1.64 | 1.05 | 1.08 | .77 | .90 | .72 | 1.03 | 1.41 | 1.05 | 1.30 | 1.70 |
| 1907.. | 1.34 | 1.27 | 1.39 | 1.42 | .67 | .71 | .76 | .71 | .91 | 1.24 | 1.59 | 1.46 | 1.79 |
| 1908.. | 1.73 | 1.89 | 1.22 | 1.35 | 1.11 | .65 | .66 | .68 | .73 | 1.17 | 1.14 | 1.31 | 1.97 |
| Mean. | 1.53 | 1.50 | 1.34 | 1.12 | .86 | .76 | .69 | .66 | .87 | 1.14 | 1.29 | 1.41 | 1.88 |

| YEAR. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Annual Maximum |
|--------|----------|-----------|--------|--------|-------|-------|-------|---------|------------|----------|-----------|-----------|----------------|
| 1889.. | 30.82 | 30.97 | 30.66 | 30.54 | 30.40 | 30.54 | 30.35 | 30.45 | 30.40 | 30.52 | 30.67 | 30.96 | 30.97 |
| 1890.. | 30.94 | 30.72 | 30.56 | 30.57 | 30.32 | 30.28 | 30.27 | 30.28 | 30.42 | 30.41 | 30.35 | 30.61 | 30.94 |
| 1891.. | 30.62 | 30.69 | 30.57 | 30.56 | 30.44 | 30.22 | 30.37 | 30.27 | 30.45 | 30.67 | 30.74 | 30.55 | 30.74 |
| 1892.. | 30.67 | 30.72 | 30.45 | 30.53 | 30.43 | 30.39 | 30.50 | 30.24 | 30.42 | 30.43 | 30.44 | 30.53 | 30.72 |
| 1893.. | 30.61 | 30.83 | 30.63 | 30.65 | 30.32 | 30.36 | 30.25 | 30.30 | 30.45 | 30.65 | 30.70 | 30.92 | 30.92 |
| 1894.. | 30.77 | 30.89 | 30.57 | 30.52 | 30.50 | 30.33 | 30.31 | 30.24 | 30.63 | 30.42 | 30.73 | 30.53 | 30.89 |
| 1895.. | 30.61 | 30.44 | 30.52 | 30.70 | 30.55 | 30.51 | 30.33 | 30.29 | 30.41 | 30.67 | 30.73 | 30.83 | 30.83 |
| 1896.. | 30.56 | 30.49 | 30.62 | 30.60 | 30.48 | 30.42 | 30.49 | 30.39 | 30.40 | 30.62 | 30.86 | 30.94 | 30.94 |
| 1897.. | 30.77 | 30.70 | 30.88 | 30.61 | 30.36 | 30.28 | 30.33 | 30.18 | 30.40 | 30.67 | 30.60 | 30.60 | 30.88 |
| 1898.. | 30.61 | 30.64 | 30.76 | 30.34 | 30.33 | 30.35 | 30.44 | 30.26 | 30.41 | 30.46 | 30.53 | 30.52 | 30.76 |
| 1899.. | 30.92 | 30.53 | 30.49 | 30.39 | 30.29 | 30.25 | 30.24 | 30.31 | 30.47 | 30.50 | 30.54 | 30.66 | 30.92 |
| 1900.. | 30.67 | 30.75 | 30.59 | 30.48 | 30.38 | 30.19 | 30.16 | 30.25 | 30.35 | 30.52 | 30.64 | 30.51 | 30.75 |
| 1901.. | 30.69 | 30.34 | 30.43 | 30.52 | 30.20 | 30.24 | 30.29 | 30.28 | 30.51 | 30.66 | 30.37 | 30.58 | 30.69 |
| 1902.. | 30.66 | 30.27 | 30.50 | 30.28 | 30.43 | 30.46 | 30.29 | 30.26 | 30.38 | 30.52 | 30.48 | 30.75 | 30.75 |
| 1903.. | 30.62 | 30.48 | 30.65 | 30.46 | 30.54 | 30.39 | 30.17 | 30.42 | 30.42 | 30.40 | 30.70 | 30.60 | 30.70 |
| 1904.. | 30.90 | 30.67 | 30.96 | 30.50 | 30.37 | 30.35 | 30.26 | 30.42 | 30.62 | 30.57 | 30.57 | 30.54 | 30.96 |
| 1905.. | 30.70 | 30.62 | 30.60 | 30.37 | 30.38 | 30.19 | 30.15 | 30.27 | 30.41 | 30.58 | 30.63 | 30.86 | 30.86 |
| 1906.. | 30.78 | 30.95 | 30.92 | 30.45 | 30.49 | 30.35 | 30.46 | 30.38 | 30.50 | 30.63 | 30.42 | 30.77 | 30.95 |
| 1907.. | 30.75 | 30.78 | 30.59 | 30.41 | 30.34 | 30.22 | 30.18 | 30.35 | 30.39 | 30.60 | 30.59 | 30.45 | 30.78 |
| 1908.. | 30.59 | 30.83 | 30.59 | 30.52 | 30.31 | 30.40 | 30.26 | 30.34 | 30.45 | 30.59 | 30.45 | 30.61 | 30.83 |
| Mean | | | | | | | | | | | | | |
| Max. | 30.71 | 30.68 | 30.63 | 30.50 | 30.39 | 30.34 | 30.31 | 30.31 | 30.44 | 30.55 | 30.59 | 30.67 | 30.84 |

Minimum Barometer.

| YEAR. | January. | February. | March | April. | May. | June. | July. | August. | September. | October. | November. | December. | Annual Minimum |
|--------|----------|-----------|-------|--------|-------|-------|-------|---------|------------|----------|-----------|-----------|----------------|
| 1889.. | 29.20 | 29.46 | 29.08 | 29.38 | 29.65 | 29.57 | 29.67 | 29.79 | 29.42 | 29.56 | 29.36 | 29.21 | 29.08 |
| 1890.. | 29.44 | 29.37 | 29.48 | 29.49 | 29.51 | 29.70 | 29.64 | 29.18 | 29.73 | 29.32 | 29.37 | 29.41 | 29.18 |
| 1891.. | 28.69 | 29.33 | 29.36 | 29.14 | 29.65 | 29.69 | 29.63 | 29.66 | 29.72 | 29.56 | 29.18 | 29.33 | 28.69 |
| 1892.. | 29.29 | 29.07 | 29.29 | 29.51 | 29.47 | 29.55 | 29.53 | 29.69 | 29.46 | 29.45 | 29.44 | 29.52 | 29.07 |
| 1893.. | 29.08 | 29.00 | 29.36 | 29.40 | 29.16 | 29.69 | 29.57 | 29.37 | 29.64 | 29.28 | 29.54 | 29.39 | 29.00 |
| 1894.. | 28.88 | 29.24 | 29.53 | 29.66 | 29.57 | 29.58 | 29.74 | 29.80 | 29.52 | 29.23 | 29.51 | 29.30 | 28.88 |
| 1895.. | 29.17 | 28.56 | 29.28 | 29.30 | 29.71 | 29.85 | 29.82 | 29.76 | 29.73 | 29.58 | 29.26 | 29.05 | 28.56 |
| 1896.. | 29.59 | 28.72 | 29.10 | 29.64 | 29.73 | 29.59 | 29.70 | 29.80 | 29.55 | 29.52 | 29.63 | 29.37 | 28.72 |
| 1897.. | 29.20 | 29.55 | 29.14 | 29.51 | 29.60 | 29.63 | 29.61 | 29.57 | 29.67 | 29.55 | 29.12 | 29.18 | 29.12 |
| 1898.. | 29.18 | 29.01 | 29.59 | 29.48 | 29.57 | 29.40 | 29.63 | 29.66 | 29.59 | 29.27 | 29.28 | 29.13 | 29.01 |
| 1899.. | 29.22 | 29.12 | 28.95 | 29.49 | 29.69 | 29.66 | 29.63 | 29.75 | 29.56 | 29.74 | 29.44 | 29.10 | 29.10 |
| 1900.. | 29.08 | 28.86 | 29.06 | 29.47 | 29.39 | 29.51 | 29.42 | 29.72 | 29.32 | 29.42 | 28.93 | 28.98 | 28.86 |
| 1901.. | 29.01 | 29.37 | 29.26 | 29.33 | 29.43 | 29.63 | 29.70 | 29.76 | 29.51 | 29.44 | 29.23 | 29.42 | 29.01 |
| 1902.. | 29.17 | 28.86 | 28.95 | 29.24 | 29.49 | 29.24 | 29.61 | 29.59 | 29.60 | 29.27 | 29.36 | 29.41 | 28.86 |
| 1903.. | 29.13 | 28.93 | 29.46 | 29.31 | 29.69 | 29.42 | 29.60 | 29.65 | 29.69 | 29.32 | 29.38 | 29.04 | 28.93 |
| 1904.. | 29.40 | 29.31 | 29.38 | 29.50 | 29.62 | 29.54 | 29.53 | 29.69 | 29.42 | 29.28 | 28.73 | 29.11 | 28.73 |
| 1905.. | 29.33 | 29.34 | 29.71 | 29.22 | 29.53 | 29.36 | 29.57 | 29.55 | 29.75 | 29.42 | 29.41 | 29.33 | 29.22 |
| 1906.. | 29.25 | 29.67 | 29.28 | 29.40 | 29.41 | 29.58 | 29.56 | 29.66 | 29.47 | 29.22 | 29.37 | 29.47 | 29.25 |
| 1907.. | 29.41 | 29.51 | 29.29 | 28.99 | 29.69 | 29.51 | 29.42 | 29.64 | 29.48 | 29.36 | 29.00 | 29.05 | 28.99 |
| 1908.. | 28.86 | 28.94 | 29.37 | 29.27 | 29.20 | 29.75 | 29.69 | 29.66 | 29.72 | 29.42 | 29.31 | 29.30 | 28.86 |
| Mean | 29.18 | 29.16 | 29.29 | 29.39 | 29.54 | 29.57 | 29.61 | 29.65 | 29.58 | 29.41 | 29.29 | 29.25 | 28.96 |
| Min. | 29.18 | 29.16 | 29.29 | 29.39 | 29.54 | 29.57 | 29.61 | 29.65 | 29.58 | 29.41 | 29.29 | 29.25 | 28.96 |

Mean Temperature (in degrees F.)

| YEAR. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Annual Mean. |
|--------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|--------------|
| 1889*. | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 1890*. | 29.2 | 32.0 | 31.0 | 45.8 | 56.3 | 65.3 | 68.4 | 67.2 | 60.4 | 48.2 | 37.2 | 21.8 | 46.9 |
| 1891*. | 26.4 | 27.6 | 32.7 | 47.5 | 55.6 | 65.2 | 66.3 | 69.0 | 64.9 | 48.7 | 38.1 | 36.9 | 48.2 |
| 1892*. | 23.6 | 26.1 | 31.4 | 45.2 | 56.0 | 69.3 | 69.3 | 68.9 | 59.3 | 48.6 | 37.8 | 26.3 | 46.8 |
| 1893*. | 16.1 | 22.9 | 30.4 | 43.0 | 55.8 | 66.9 | 68.1 | 69.2 | 55.8 | 52.6 | 38.2 | 25.5 | 45.4 |
| 1894*. | 26.4 | 21.6 | 39.6 | 46.7 | 57.3 | 67.8 | 72.9 | 68.0 | 65.5 | 51.5 | 34.8 | 26.9 | 47.9 |
| 1895*. | 23.2 | 19.5 | 31.2 | 45.6 | 59.7 | 69.1 | 67.6 | 69.7 | 64.1 | 45.6 | 40.7 | 30.5 | 47.2 |
| 1896*. | 20.7 | 25.0 | 29.2 | 48.3 | 61.1 | 65.0 | 71.3 | 68.8 | 59.5 | 47.0 | 42.2 | 25.6 | 47.0 |
| 1897*. | 24.7 | 25.4 | 33.1 | 47.1 | 56.8 | 62.0 | 71.6 | 66.8 | 60.1 | 49.8 | 36.2 | 28.3 | 46.8 |
| 1898*. | 21.8 | 26.1 | 39.7 | 42.4 | 55.3 | 66.1 | 70.9 | 70.2 | 63.6 | 51.1 | 37.5 | 25.9 | 47.5 |
| 1899†. | 23.3 | 21.8 | 30.6 | 46.1 | 55.7 | 67.4 | 70.1 | 68.0 | 59.7 | 51.1 | 37.0 | 30.8 | 46.8 |
| 1900†. | 25.5 | 24.6 | 29.5 | 46.9 | 55.4 | 67.1 | 70.6 | 70.1 | 63.8 | 54.5 | 41.3 | 30.6 | 48.3 |
| 1901†. | 23.7 | 20.1 | 33.1 | 46.8 | 56.2 | 68.0 | 72.5 | 69.9 | 62.1 | 50.1 | 33.4 | 26.4 | 46.9 |
| 1902†. | 22.9 | 25.5 | 40.5 | 47.3 | 57.0 | 63.5 | 67.8 | 66.1 | 60.3 | 50.7 | 42.8 | 23.5 | 47.3 |
| 1903†. | 24.3 | 27.3 | 42.6 | 46.9 | 59.2 | 59.6 | 68.9 | 62.0 | 61.3 | 51.1 | 34.3 | 22.5 | 46.7 |
| 1904†. | 14.3 | 17.7 | 31.0 | 42.5 | 60.1 | 65.0 | 69.8 | 66.4 | 59.8 | 47.2 | 33.0 | 19.6 | 43.9 |
| 1905†. | 20.4 | 17.7 | 33.1 | 45.6 | 56.9 | 64.4 | 71.1 | 65.8 | 59.1 | 49.9 | 36.3 | 29.8 | 45.8 |
| 1906†. | 29.6 | 23.8 | 28.3 | 45.1 | 56.7 | 66.1 | 70.1 | 70.5 | 64.0 | 50.5 | 38.5 | 24.2 | 47.3 |
| 1907†. | 22.4 | 16.5 | 35.2 | 41.5 | 51.8 | 63.9 | 70.0 | 66.1 | 61.3 | 45.6 | 37.6 | 30.5 | 45.2 |
| 1908†. | 25.7 | 20.5 | 34.7 | 45.1 | 59.2 | 67.6 | 72.5 | 66.6 | 62.9 | 51.3 | 38.0 | 27.1 | 47.6 |
| Mean. | 23.4 | 23.3 | 33.5 | 45.6 | 57.0 | 65.7 | 70.0 | 67.9 | 61.2 | 49.2 | 37.7 | 26.9 | 46.8 |

* Mean of Daily Maximum and Minimum.

† Mean Hourly.

Range of Temperature (in Degrees F.)

| YEAR. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Annual Range. |
|--------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|---------------|
| 1889.. | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 1890.. | 57.0 | 54.5 | 69.0 | 57.5 | 48.5 | 47.5 | 54.0 | 47.0 | 52.0 | 52.0 | 51.0 | 48.5 | 100.5 |
| 1891.. | 52.5 | 60.0 | 57.5 | 61.5 | 62.0 | 60.0 | 48.5 | 47.5 | 55.5 | 69.0 | 60.5 | 51.5 | 100.0 |
| 1892.. | 66.5 | 53.5 | 54.5 | 58.5 | 56.0 | 54.0 | 52.0 | 44.0 | 49.0 | 54.5 | 53.0 | 47.0 | 104.5 |
| 1893.. | 63.0 | 54.5 | 48.0 | 48.5 | 57.0 | 52.5 | 49.5 | 57.0 | 51.0 | 57.0 | 52.0 | 64.0 | 109.0 |
| 1894.. | 52.0 | 66.0 | 56.0 | 63.0 | 56.0 | 55.5 | 50.0 | 54.0 | 56.0 | 43.0 | 55.0 | 55.0 | 115.0 |
| 1895.. | 50.0 | 55.0 | 44.0 | 56.0 | 62.5 | 51.0 | 54.0 | 52.0 | 64.0 | 51.0 | 57.0 | 68.0 | 105.0 |
| 1896.. | 53.0 | 67.0 | 52.0 | 67.5 | 62.5 | 51.0 | 41.0 | 55.0 | 57.5 | 49.0 | 54.0 | 62.0 | 111.0 |
| 1897.. | 51.0 | 59.0 | 60.5 | 60.0 | 48.0 | 47.5 | 36.0 | 43.0 | 59.5 | 63.5 | 58.0 | 62.5 | 102.5 |
| 1898.. | 65.5 | 73.0 | 45.5 | 54.0 | 46.0 | 50.0 | 56.5 | 46.5 | 58.5 | 59.5 | 56.0 | 60.0 | 115.5 |
| 1899.. | 70.5 | 61.0 | 42.0 | 61.0 | 55.5 | 51.0 | 47.0 | 51.0 | 51.5 | 61.5 | 40.5 | 59.0 | 114.5 |
| 1900.. | 56.0 | 64.0 | 46.0 | 59.0 | 67.5 | 54.0 | 51.0 | 53.0 | 53.5 | 61.0 | 55.0 | 57.5 | 104.0 |
| 1901.. | 55.0 | 48.5 | 57.0 | 58.5 | 50.5 | 57.5 | 52.0 | 33.5 | 59.0 | 51.0 | 54.0 | 70.5 | 111.0 |
| 1902.. | 47.5 | 49.0 | 48.5 | 57.5 | 61.0 | 49.0 | 45.0 | 44.0 | 51.5 | 51.5 | 47.5 | 64.0 | 106.0 |
| 1903.. | 57.5 | 68.0 | 57.0 | 62.0 | 68.0 | 48.5 | 52.5 | 42.0 | 60.5 | 55.0 | 68.5 | 61.5 | 109.0 |
| 1904.. | 66.0 | 56.0 | 68.0 | 50.5 | 48.0 | 51.5 | 48.0 | 49.5 | 58.5 | 59.5 | 49.0 | 47.0 | 120.5 |
| 1905.. | 64.0 | 59.5 | 76.0 | 57.0 | 50.5 | 54.0 | 47.0 | 47.5 | 53.0 | 59.0 | 50.0 | 51.5 | 106.0 |
| 1906.. | 56.5 | 57.5 | 60.5 | 53.5 | 58.5 | 50.5 | 43.5 | 43.0 | 59.5 | 53.5 | 43.5 | 48.5 | 98.5 |
| 1907.. | 78.0 | 61.5 | 74.0 | 49.0 | 65.0 | 57.0 | 46.0 | 55.0 | 49.0 | 52.5 | 40.5 | 50.5 | 119.5 |
| 1908.. | 58.5 | 68.0 | 62.0 | 66.0 | 55.0 | 55.5 | 50.0 | 51.5 | 55.0 | 67.5 | 39.5 | 63.5 | 108.0 |
| Mean. | 58.8 | 59.8 | 56.6 | 57.9 | 56.7 | 52.5 | 48.1 | 48.3 | 55.5 | 56.3 | 52.0 | 54.6 | 108.4 |

Maximum Temperatures (in Degrees F.)

| YEAR. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Annual Maximum |
|--------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|----------------|
| 1889.. | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 1890.. | 61.5 | 57.5 | 62.5 | 79.5 | 80.0 | 88.0 | 94.0 | 88.5 | 80.5 | 78.0 | 62.5 | 43.5 | 94.0 |
| 1891.. | 52.0 | 54.0 | 56.5 | 79.5 | 87.0 | 94.0 | 90.0 | 92.5 | 91.5 | 89.0 | 64.0 | 60.5 | 94.0 |
| 1892.. | 57.0 | 46.5 | 60.5 | 78.5 | 84.0 | 95.0 | 94.0 | 94.0 | 80.0 | 77.5 | 67.0 | 46.0 | 95.0 |
| 1893.. | 50.0 | 50.0 | 52.0 | 67.5 | 87.0 | 94.0 | 90.5 | 96.0 | 81.0 | 80.0 | 63.0 | 52.0 | 96.0 |
| 1894.. | 53.0 | 49.0 | 73.0 | 79.0 | 85.0 | 93.0 | 98.0 | 91.0 | 91.0 | 75.0 | 65.0 | 51.0 | 98.0 |
| 1895.. | 45.5 | 45.0 | 49.0 | 81.0 | 92.0 | 95.0 | 90.0 | 90.0 | 97.0 | 71.0 | 72.0 | 65.0 | 97.0 |
| 1896.. | 41.0 | 53.0 | 57.0 | 88.5 | 94.5 | 90.0 | 91.0 | 97.0 | 88.5 | 72.0 | 69.0 | 52.5 | 97.0 |
| 1897.. | 51.0 | 48.0 | 59.0 | 80.5 | 79.5 | 85.5 | 91.0 | 85.0 | 91.5 | 84.0 | 63.0 | 59.0 | 91.5 |
| 1898.. | 50.0 | 54.0 | 60.0 | 71.0 | 78.5 | 89.5 | 96.5 | 91.0 | 93.0 | 86.5 | 62.0 | 48.0 | 96.5 |
| 1899.. | 49.0 | 51.0 | 52.0 | 82.0 | 88.5 | 93.0 | 90.0 | 92.0 | 84.0 | 82.0 | 58.0 | 61.0 | 93.0 |
| 1900.. | 51.5 | 56.0 | 49.0 | 80.0 | 91.5 | 94.0 | 95.5 | 96.0 | 89.0 | 83.0 | 67.0 | 58.0 | 96.0 |
| 1901.. | 47.0 | 44.0 | 56.5 | 86.5 | 82.0 | 98.5 | 100.5 | 86.5 | 92.0 | 75.0 | 60.0 | 60.0 | 100.5 |
| 1902.. | 47.0 | 54.0 | 65.0 | 83.0 | 91.0 | 89.0 | 90.0 | 87.0 | 86.5 | 74.0 | 65.0 | 49.0 | 91.0 |
| 1903.. | 45.5 | 57.0 | 76.0 | 84.0 | 92.5 | 86.5 | 97.0 | 84.5 | 91.0 | 77.5 | 74.5 | 52.0 | 97.0 |
| 1904.. | 40.0 | 48.0 | 65.0 | 70.5 | 85.0 | 92.5 | 94.5 | 89.5 | 84.5 | 77.5 | 56.5 | 43.5 | 94.5 |
| 1905.. | 51.0 | 48.5 | 77.0 | 79.0 | 82.5 | 90.0 | 93.0 | 89.0 | 85.0 | 80.5 | 61.0 | 54.5 | 93.0 |
| 1906.. | 60.0 | 52.5 | 53.0 | 74.5 | 90.0 | 87.5 | 88.5 | 90.5 | 91.0 | 77.5 | 62.0 | 45.5 | 91.0 |
| 1907.. | 54.5 | 43.0 | 79.5 | 70.5 | 90.0 | 95.0 | 90.0 | 96.0 | 85.0 | 73.0 | 60.0 | 60.5 | 96.0 |
| 1908.. | 53.0 | 56.0 | 67.0 | 84.0 | 88.5 | 91.5 | 96.0 | 88.5 | 88.0 | 90.5 | 58.0 | 65.5 | 96.0 |
| Mean. | 50.5 | 50.9 | 61.4 | 78.9 | 86.7 | 91.7 | 93.2 | 90.8 | 87.9 | 79.1 | 63.7 | 50.8 | 95.1 |

Minimum Temperatures (in Degrees F.)

| YEAR. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Annual Minimum |
|--------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|----------------|
| 1889.. | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 1890.. | 4.5 | 3.0 | -6.5 | 22.0 | 31.5 | 40.5 | 40.0 | 41.5 | 28.5 | 26.0 | 11.5 | -5.0 | -6.5 |
| 1891.. | -0.4 | -6.0 | -1.0 | 18.0 | 25.0 | 34.0 | 41.5 | 45.0 | 36.0 | 20.0 | 3.5 | 9.0 | -6.0 |
| 1892.. | -9.5 | -7.0 | 6.0 | 20.5 | 28.0 | 41.0 | 42.0 | 50.0 | 31.0 | 23.0 | 14.0 | -1.0 | -9.5 |
| 1893.. | -13.0 | -4.5 | 4.0 | 19.0 | 30.0 | 41.5 | 41.0 | 39.0 | 30.0 | 23.0 | 11.0 | -12.0 | -13.0 |
| 1894.. | 1.0 | -17.0 | 17.0 | 16.0 | 29.0 | 37.5 | 48.0 | 37.0 | 35.0 | 32.0 | 10.0 | -4.0 | -17.0 |
| 1895.. | -4.5 | -10.0 | 5.0 | 25.0 | 29.5 | 44.0 | 46.0 | 38.0 | 33.0 | 20.0 | 15.0 | -3.0 | -10.0 |
| 1896.. | -12.0 | -14.0 | 5.0 | 21.0 | 32.0 | 39.0 | 50.0 | 42.0 | 31.0 | 23.0 | 15.0 | -9.5 | -14.0 |
| 1897.. | 0.0 | -11.0 | -1.5 | 20.5 | 31.5 | 38.0 | 55.0 | 42.0 | 32.0 | 20.5 | 5.0 | -3.5 | -11.0 |
| 1898.. | -15.5 | -19.0 | 14.5 | 17.0 | 32.5 | 39.5 | 40.0 | 44.5 | 34.5 | 27.0 | 6.0 | -12.0 | -19.0 |
| 1899.. | -21.5 | -10.0 | 10.0 | 21.0 | 33.0 | 42.0 | 43.0 | 41.0 | 32.5 | 20.5 | 17.5 | 2.0 | -21.5 |
| 1900.. | -4.5 | -8.0 | 3.0 | 21.0 | 24.0 | 40.0 | 44.5 | 43.0 | 35.5 | 22.0 | 12.0 | 0.5 | -8.0 |
| 1901.. | -8.0 | -4.5 | -0.5 | 28.0 | 31.5 | 41.0 | 48.5 | 53.0 | 33.0 | 24.0 | 6.0 | -10.5 | -10.5 |
| 1902.. | -0.5 | 5.0 | 16.5 | 25.5 | 30.0 | 40.0 | 45.0 | 43.0 | 35.0 | 22.5 | 17.5 | -15.0 | -15.0 |
| 1903.. | -12.0 | -11.0 | 19.0 | 22.0 | 24.5 | 38.0 | 44.5 | 42.5 | 30.5 | 22.5 | 6.0 | -9.5 | -12.0 |
| 1904.. | -26.0 | -8.0 | -3.0 | 20.0 | 37.0 | 44.0 | 46.5 | 40.0 | 26.0 | 18.0 | 7.5 | -3.5 | -26.0 |
| 1905.. | -13.0 | -11.0 | 1.0 | 22.0 | 32.0 | 36.0 | 46.0 | 41.5 | 32.0 | 21.5 | 11.0 | 3.0 | -13.0 |
| 1906.. | 3.5 | -5.0 | -7.5 | 21.0 | 31.5 | 37.0 | 45.0 | 47.5 | 31.5 | 24.0 | 18.5 | -3.0 | -7.5 |
| 1907.. | -23.5 | -18.5 | 5.5 | 20.5 | 25.0 | 38.0 | 44.0 | 41.0 | 36.0 | 20.5 | 19.5 | 10.0 | -23.5 |
| 1908.. | -5.5 | -12.0 | 5.0 | 18.0 | 33.5 | 36.0 | 46.0 | 37.0 | 33.0 | 23.0 | 18.5 | 2.0 | -12.0 |
| Mean. | -8.3 | -8.9 | 4.8 | 20.9 | 30.1 | 39.3 | 45.1 | 42.5 | 32.4 | 22.8 | 11.8 | -3.4 | -13.4 |

Mean Dew Point (in Degrees F.)

| YEAR. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Annual. |
|--------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|---------|
| 1889.. | 26.3 | 21.2 | 30.4 | 43.8 | 52.8 | 61.1 | 62.7 | 59.5 | 56.9 | 39.4 | 38.3 | 30.9 | 43.6 |
| 1890.. | 23.8 | 25.2 | 26.5 | 35.6 | 58.0 | 57.9 | 61.5 | 57.2 | 55.8 | 41.0 | 29.7 | 14.7 | 40.6 |
| 1891.. | 20.7 | 21.7 | 22.6 | 36.3 | 44.6 | 57.0 | 58.5 | 62.4 | 58.1 | 40.6 | 30.4 | 28.2 | 40.1 |
| 1892.. | 18.8 | 20.9 | 21.5 | 33.0 | 44.9 | 62.3 | 60.9 | 62.1 | 51.9 | 41.0 | 32.1 | 20.5 | 39.2 |
| 1893.. | 13.9 | 17.3 | 24.0 | 31.4 | 45.7 | 58.3 | 58.8 | 59.9 | 49.1 | 44.2 | 29.9 | 21.9 | 37.9 |
| 1894.. | 21.6 | 17.9 | 31.1 | 34.2 | 52.6 | 57.9 | 62.4 | 58.6 | 56.2 | 44.6 | 27.3 | 22.3 | 40.5 |
| 1895.. | 19.2 | 17.1 | 26.2 | 35.8 | 48.7 | 59.6 | 59.3 | 60.4 | 54.8 | 35.4 | 34.4 | 23.6 | 39.5 |
| 1896.. | 14.3 | 22.0 | 25.6 | 35.9 | 48.3 | 53.9 | 62.4 | 61.7 | 54.5 | 42.4 | 37.7 | 19.6 | 39.9 |
| 1897.. | 18.0 | 18.1 | 26.9 | 35.7 | 48.0 | 53.3 | 64.6 | 59.7 | 52.7 | 39.0 | 31.8 | 24.2 | 39.6 |
| 1898.. | 18.4 | 21.8 | 30.5 | 34.2 | 48.8 | 59.3 | 64.6 | 64.6 | 56.9 | 46.6 | 32.7 | 20.8 | 41.6 |
| 1899.. | 16.6 | 17.0 | 25.5 | 36.5 | 48.6 | 59.5 | 62.5 | 59.4 | 51.5 | 48.8 | 29.8 | 25.1 | 40.1 |
| 1900.. | 18.1 | 17.8 | 19.3 | 34.9 | 43.7 | 57.0 | 62.3 | 62.0 | 54.7 | 47.1 | 32.0 | 21.7 | 39.2 |
| 1901.. | 16.6 | 10.6 | 24.7 | 35.6 | 45.7 | 56.2 | 63.4 | 62.3 | 54.5 | 39.9 | 24.1 | 17.9 | 37.6 |
| 1902.. | 12.3 | 15.1 | 32.2 | 36.3 | 44.0 | 53.5 | 57.3 | 57.8 | 53.7 | 40.5 | 34.2 | 15.0 | 37.7 |
| 1903.. | 16.0 | 21.0 | 34.6 | 34.1 | 44.9 | 53.7 | 59.3 | 54.7 | 52.5 | 39.2 | 25.6 | 16.1 | 37.6 |
| 1904.. | 9.3 | 9.5 | 22.4 | 31.5 | 48.4 | 56.6 | 61.5 | 59.0 | 52.7 | 37.5 | 25.1 | 12.6 | 35.5 |
| 1905.. | 12.8 | 9.2 | 24.8 | 33.5 | 45.7 | 56.5 | 63.2 | 59.0 | 52.4 | 40.3 | 26.8 | 23.8 | 37.3 |
| 1906.. | 20.8 | 15.2 | 19.3 | 34.7 | 46.4 | 58.3 | 63.1 | 63.6 | 55.2 | 42.9 | 27.7 | 16.5 | 38.6 |
| 1907.. | 13.4 | 9.0 | 25.8 | 32.0 | 42.2 | 55.0 | 61.0 | 56.5 | 54.6 | 37.1 | 32.0 | 23.7 | 36.9 |
| 1908.. | 16.5 | 14.7 | 26.9 | 31.9 | 50.1 | 56.2 | 63.7 | 58.3 | 53.5 | 41.8 | 30.1 | 18.6 | 38.5 |
| Mean. | 17.4 | 17.1 | 26.0 | 41.7 | 52.0 | 58.9 | 61.6 | 59.9 | 41.5 | 51.4 | 30.6 | 20.9 | 39.1 |

Mean Relative Humidity.

| YEAR. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Annual. |
|--------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|---------|
| 1889.. | 79.0 | 90.0 | 75.0 | 78.3 | 73.8 | 79.1 | 78.2 | 80.4 | 83.3 | 75.7 | 75.4 | 75.2 | 78.6 |
| 1890.. | 68.2 | 74.8 | 77.3 | 64.7 | 67.1 | 71.3 | 70.1 | 74.9 | 80.9 | 68.2 | 67.8 | 67.2 | 71.1 |
| 1891.. | 72.2 | 69.4 | 63.7 | 60.1 | 59.3 | 65.3 | 66.1 | 70.3 | 72.1 | 65.5 | 68.7 | 68.7 | 66.8 |
| 1892.. | 73.7 | 72.8 | 64.1 | 54.5 | 60.3 | 68.9 | 65.6 | 74.9 | 70.7 | 65.5 | 71.0 | 70.3 | 67.7 |
| 1893.. | 80.2 | 74.7 | 71.4 | 64.8 | 66.0 | 71.1 | 64.8 | 70.7 | 72.8 | 67.0 | 68.8 | 80.9 | 71.1 |
| 1894.. | 78.8 | 77.5 | 67.5 | 60.5 | 65.8 | 68.1 | 68.2 | 69.9 | 74.4 | 82.7 | 70.8 | 79.0 | 71.9 |
| 1895.. | 82.5 | 83.9 | 80.6 | 68.1 | 65.0 | 68.5 | 72.7 | 72.7 | 73.7 | 69.2 | 80.5 | 75.4 | 74.4 |
| 1896.. | 73.3 | 87.5 | 85.3 | 62.0 | 62.5 | 67.3 | 73.1 | 79.9 | 84.0 | 85.0 | 82.3 | 79.8 | 76.9 |
| 1897.. | 77.1 | 75.7 | 78.9 | 68.2 | 71.5 | 73.3 | 80.1 | 79.6 | 76.6 | 68.7 | 83.2 | 83.9 | 76.4 |
| 1898.. | 85.2 | 83.1 | 72.6 | 72.1 | 78.4 | 77.1 | 79.3 | 82.1 | 80.0 | 83.6 | 83.4 | 80.2 | 79.8 |
| 1899.. | 77.7 | 82.5 | 79.1 | 69.2 | 70.3 | 74.0 | 75.2 | 74.1 | 74.0 | 75.9 | 76.2 | 79.4 | 75.6 |
| 1900.. | 75.1 | 77.4 | 67.8 | 64.7 | 65.5 | 69.5 | 71.1 | 75.9 | 73.1 | 77.0 | 75.9 | 74.9 | 72.3 |
| 1901.. | 74.3 | 68.5 | 70.8 | 68.1 | 68.1 | 65.5 | 72.3 | 76.3 | 76.8 | 70.5 | 71.1 | 69.8 | 71.0 |
| 1902.. | 66.2 | 66.8 | 72.3 | 67.1 | 63.4 | 70.8 | 77.2 | 76.3 | 79.1 | 70.9 | 75.6 | 72.5 | 71.6 |
| 1903.. | 72.0 | 77.7 | 76.4 | 64.7 | 61.3 | 81.1 | 71.4 | 78.2 | 75.0 | 74.5 | 73.5 | 76.5 | 73.5 |
| 1904.. | 85.5 | 77.7 | 74.4 | 70.8 | 69.7 | 77.0 | 77.7 | 80.5 | 81.8 | 74.0 | 77.5 | 77.8 | 77.0 |
| 1905.. | 77.2 | 75.1 | 76.7 | 66.7 | 68.2 | 78.8 | 79.1 | 82.5 | 83.2 | 75.9 | 73.5 | 80.6 | 76.5 |
| 1906.. | 74.8 | 77.4 | 73.9 | 70.3 | 70.9 | 79.1 | 82.4 | 82.9 | 80.1 | 84.1 | 72.2 | 77.0 | 77.1 |
| 1907.. | 76.1 | 80.2 | 73.4 | 74.1 | 75.3 | 76.9 | 76.4 | 74.9 | 83.0 | 77.7 | 85.9 | 80.4 | 77.9 |
| 1908.. | 73.8 | 84.8 | 77.9 | 64.3 | 74.8 | 66.2 | 76.6 | 79.0 | 79.1 | 79.0 | 79.6 | 75.1 | 75.8 |
| Mean. | 76.1 | 77.9 | 74.0 | 66.7 | 67.9 | 72.4 | 73.9 | 76.8 | 77.7 | 74.5 | 75.6 | 76.2 | 74.1 |

Mean Per Cent. of Cloudiness, from Tri-, or Semi-Daily Observations.

| YEAR. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Annual. |
|-----------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|---------|
| 1889..... | 55 | 40 | 63 | 55 | 42 | 53 | 54 | 43 | 65 | 60 | 68 | 61 | 55 |
| 1890..... | 52 | 66 | 66 | 50 | 59 | 50 | 56 | 57 | 59 | 64 | 47 | 53 | 57 |
| 1891..... | 61 | 59 | 55 | 49 | 54 | 47 | 54 | 58 | 50 | 54 | 50 | 51 | 53 |
| 1892..... | 63 | 55 | 45 | 42 | 66 | 50 | 35 | 53 | 29 | 46 | 58 | 45 | 49 |
| 1893..... | 52 | 57 | 46 | 55 | 55 | 58 | 44 | 45 | 46 | 40 | 49 | 54 | 50 |
| 1894..... | 53 | 53 | 55 | 53 | 52 | 54 | 50 | 44 | 53 | 44 | 50 | 44 | 50 |
| 1895..... | 51 | 39 | 55 | 54 | 46 | 48 | 58 | 44 | 42 | 42 | 61 | 45 | 49 |
| 1896..... | 43 | 63 | 54 | 39 | 40 | 47 | 50 | 40 | 52 | 63 | 59 | 42 | 49 |
| 1897..... | 46 | 51 | 56 | 46 | 47 | 47 | 64 | 42 | 39 | 39 | 71 | 68 | 51 |
| 1898..... | 66 | 64 | 53 | 68 | 65 | 57 | 53 | 60 | 48 | 62 | 60 | 66 | 60 |
| 1899..... | 53 | 58 | 66 | 42 | 54 | 54 | 50 | 57 | 47 | 60 | 53 | 52 | 54 |
| 1900..... | 52 | 62 | 47 | 46 | 54 | 49 | 48 | 49 | 54 | 64 | 72 | 62 | 55 |
| 1901..... | 58 | 45 | 68 | 75 | 70 | 48 | 63 | 67 | 51 | 48 | 65 | 65 | 60 |
| 1902..... | 60 | 63 | 66 | 68 | 58 | 62 | 66 | 50 | 57 | 51 | 62 | 60 | 60 |
| 1903..... | 61 | 53 | 63 | 50 | 36 | 71 | 52 | 63 | 42 | 58 | 41 | 49 | 53 |
| 1904..... | 55 | 42 | 57 | 52 | 45 | 59 | 55 | 47 | 54 | 42 | 43 | 57 | 51 |
| 1905..... | 58 | 31 | 46 | 43 | 56 | 61 | 55 | 56 | 48 | 36 | 42 | 56 | 49 |
| 1906..... | 51 | 44 | 49 | 49 | 47 | 54 | 53 | 50 | 32 | 52 | 53 | 66 | 50 |
| 1907..... | 58 | 41 | 44 | 33 | 68 | 50 | 42 | 36 | 64 | 30 | 48 | 51 | 49 |
| 1908..... | 37 | 42 | 48 | 42 | 50 | 28 | 47 | 45 | 27 | 37 | 46 | 49 | 41 |
| Mean..... | 54.3 | 51.4 | 55.1 | 50.6 | 53.2 | 52.4 | 52.5 | 50.3 | 48.0 | 49.6 | 54.9 | 54.8 | 52.3 |

Hours of Bright Sunshine by Sun Thermometer.

| YEAR. | January. | February, | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Annual. |
|---------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|---------|
| Possible hrs. | 294 | 296 | 371 | 402 | 453 | 457 | 462 | 429 | 373 | 341 | 293 | 283 | 4,454 |
| 1889..... | 134 | 183 | 138 | 191 | 270 | 277 | 182 | 194 | 120 | 129 | 84 | 108 | 2,010 |
| 1890..... | 112 | 131 | 160 | 245 | 225 | 264 | 289 | 199 | 166 | 129 | 143 | 131 | 2,194 |
| 1891..... | 126 | 124 | 195 | 240 | 226 | 248 | 222 | 204 | 224 | 150 | 141 | 143 | 2,245 |
| 1892..... | 128 | 138 | 196 | 244 | 183 | 218 | 287 | 201 | 234 | 178 | 101 | 144 | 2,261 |
| 1893..... | 130 | 111 | 172 | 166 | 188 | 209 | 259 | 225 | 185 | 182 | 133 | 112 | 2,072 |
| 1894..... | 120 | 121 | 150 | 174 | 208 | 180 | 237 | 237 | 176 | 160 | 128 | 159 | 2,051 |
| 1895..... | 153 | 187 | 172 | 188 | 243 | 246 | 192 | 251 | 254 | 197 | 111 | 169 | 2,363 |
| 1896..... | 157 | 168 | 210 | 258 | 297 | 263 | 260 | 254 | 189 | 115 | 105 | 172 | 2,448 |
| 1897..... | 144 | 154 | 188 | 239 | 236 | 248 | 214 | 274 | 221 | 209 | 90 | 108 | 2,325 |
| 1898..... | 132 | 138 | 200 | 168 | 200 | 270 | 236 | 201 | 218 | 157 | 105 | 113 | 2,159 |
| 1899..... | 151 | 147 | 134 | 280 | 221 | 235 | 259 | 206 | 200 | 140 | 130 | 142 | 2,245 |
| 1900..... | 167 | 120 | 216 | 227 | 235 | 259 | 260 | 226 | 177 | 136 | 86 | 108 | 2,216 |
| 1901..... | 117 | 172 | 93 | 103 | 159 | 254 | 208 | 160 | 215 | 178 | 100 | 107 | 1,866 |
| 1902..... | 120 | 138 | 144 | 139 | 210 | 179 | 185 | 209 | 149 | 164 | 109 | 119 | 1,864 |
| 1903..... | 114 | 145 | 138 | 199 | 311 | 102 | 247 | 169 | 236 | 154 | 182 | 129 | 2,126 |
| 1904..... | 144 | 173 | 172 | 182 | 256 | 256 | 274 | 292 | 204 | 183 | 148 | 115 | 2,401 |
| 1905..... | 119 | 178 | 216 | 247 | 286 | 247 | 263 | 242 | 186 | 209 | 156 | 128 | 2,477 |
| 1906..... | 126 | 183 | 225 | 269 | 288 | 316 | 278 | 266 | 254 | 189 | 155 | 111 | 2,660 |
| 1907..... | 130 | 200 | 245 | 268 | 209 | 217 | 297 | 217 | 110 | 177 | 125 | 122 | 2,317 |
| 1908.... | 154 | 200 | 220 | 277 | 282 | 362 | 308 | 268 | 242 | 186 | 111 | 133 | 2,743 |
| Mean. | 134 | 156 | 179 | 215 | 237 | 243 | 248 | 225 | 198 | 166 | 122 | 129 | 2,252 |
| Mean per ct. | 45.7 | 52.7 | 48.2 | 53.5 | 50.1 | 53.2 | 53.7 | 52.5 | 53.1 | 47.6 | 41.6 | 45.6 | 50.5 |

Precipitation.

(in inches.)

| YEAR. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Annual. |
|--------|----------|-----------|--------|--------|-------|-------|-------|---------|------------|----------|-----------|-----------|---------|
| 1889.. | *3.50 | *1.46 | *1.02 | *3.22 | *4.18 | *5.40 | 10.52 | 2.72 | 3.17 | 4.58 | 6.04 | 3.57 | 49.38 |
| 1890.. | 2.61 | 4.20 | 5.37 | 1.73 | 5.39 | 1.53 | 5.63 | 4.88 | 5.85 | 7.13 | 1.32 | 2.86 | 48.50 |
| 1891.. | 6.75 | 4.23 | 2.99 | 2.66 | 1.97 | 4.75 | 5.28 | 4.18 | 2.66 | 2.94 | 2.99 | 5.40 | 46.80 |
| 1892.. | 5.85 | 1.90 | 2.40 | 0.76 | 6.28 | 3.46 | 4.41 | 6.47 | 2.16 | 0.66 | 4.98 | 1.01 | 40.34 |
| 1893.. | 3.33 | 5.75 | 3.66 | 4.41 | 5.02 | 3.32 | 2.59 | 3.49 | 2.82 | 4.88 | 2.81 | 4.86 | 46.94 |
| 1894.. | 2.16 | 1.74 | 1.77 | 1.83 | 4.00 | 3.13 | 1.55 | 0.31 | 4.63 | 4.85 | 3.14 | 3.53 | 32.64 |
| 1895.. | 3.87 | 1.05 | 2.71 | 5.56 | 2.07 | 2.76 | 3.87 | 3.46 | 5.04 | 4.77 | 5.36 | 3.94 | 44.46 |
| 1896.. | 1.07 | 4.67 | 6.11 | 1.32 | 2.58 | 2.57 | 4.96 | 3.84 | 5.41 | 3.23 | 3.03 | 0.87 | 39.66 |
| 1897.. | 3.00 | 2.52 | 3.53 | 2.42 | 4.38 | 6.65 | 14.51 | 4.29 | 1.94 | 0.73 | 5.85 | 7.23 | 57.05 |
| 1898.. | 7.15 | 3.80 | 1.63 | 3.73 | 5.61 | 3.69 | 4.09 | 6.85 | 3.65 | 6.27 | 5.48 | 2.30 | 54.25 |
| 1899.. | 2.80 | 3.56 | 7.13 | 1.79 | 1.28 | 4.13 | 4.89 | 2.00 | 7.90 | 1.84 | 2.17 | 2.00 | 41.49 |
| 1900.. | 1.81 | 0.62 | 5.66 | 5.95 | 6.91 | 0.87 | 3.86 | 6.14 | 4.17 | 3.88 | 2.08 | 7.77 | 51.67 |
| 1901.. | 4.08 | 8.12 | 5.76 | 1.85 | 3.78 | 3.65 | 4.67 | 4.11 | 3.67 | 3.72 | 5.87 | 2.40 | 51.67 |
| 1902.. | 1.72 | 3.54 | 5.29 | 3.31 | 2.32 | 4.54 | 4.66 | 4.65 | 5.83 | 5.59 | 1.27 | 4.27 | 46.99 |
| 1903.. | 3.28 | 4.27 | 6.40 | 2.30 | 0.48 | 7.79 | 4.64 | 4.92 | 1.66 | 2.72 | 2.04 | 3.95 | 44.45 |
| 1904.. | 4.74 | 2.45 | 4.48 | 5.73 | 4.55 | 5.35 | 2.62 | 4.09 | 5.45 | 1.74 | 1.35 | 2.75 | 45.30 |
| 1905.. | 3.90 | 1.70 | 3.66 | 2.56 | 1.28 | 2.86 | 2.63 | 6.47 | 6.26 | 2.27 | 2.06 | 3.15 | 38.80 |
| 1906.. | 2.18 | 2.73 | 4.90 | 3.25 | 4.95 | 2.82 | 3.45 | 6.54 | 2.59 | 5.69 | 1.98 | 4.42 | 45.45 |
| 1907.. | 2.73 | 1.92 | 1.82 | 1.98 | 4.02 | 2.36 | 3.87 | 1.44 | 8.74 | 5.00 | 4.50 | 3.89 | 42.27 |
| 1908.. | 2.25 | 3.53 | 2.86 | 1.97 | 4.35 | 0.76 | 3.28 | 4.27 | 1.73 | 1.57 | 1.06 | 3.05 | 30.68 |
| Mean. | 3.44 | 3.19 | 3.96 | 2.92 | 3.77 | 3.62 | 4.80 | 4.25 | 4.27 | 3.70 | 3.27 | 3.66 | 44.84 |

* Kindly furnished by Miss S. C. Snell,

Wind Movement.

(in Miles.)

| YEAR. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Annual. |
|--------|----------|-----------|--------|--------|-------|-------|-------|---------|------------|----------|-----------|-----------|---------|
| 1889.. | 5,101 | 4,828 | 7,068 | 5,648 | 4,056 | 4,056 | 4,032 | 2,811 | 4,310 | 4,762 | 2,589 | 4,445 | 53,706 |
| 1890.. | 4,914 | 4,616 | 5,395 | 5,032 | 5,284 | 3,776 | 3,976 | 4,116 | 3,507 | 4,143 | 4,228 | 5,673 | 54,648 |
| 1891.. | 4,954 | 4,759 | 6,261 | 5,484 | 4,610 | 3,713 | 3,907 | 3,324 | 3,201 | 4,319 | 5,215 | 5,465 | 55,212 |
| 1892.. | 5,059 | 3,438 | 7,046 | 5,370 | 5,056 | 4,500 | 3,365 | 3,390 | 3,672 | 4,071 | 5,231 | 4,522 | 54,720 |
| 1893.. | 4,056 | 5,242 | 5,757 | 5,384 | 4,833 | 3,572 | 3,640 | 4,126 | 3,508 | 4,198 | 4,179 | 3,916 | 52,411 |
| 1894.. | 4,193 | 4,865 | 4,406 | 4,105 | 2,180 | 1,838 | 1,109 | 1,920 | 1,414 | 2,540 | 4,179 | 3,508 | 36,257 |
| 1895.. | 2,896 | 3,920 | 4,360 | 4,098 | 4,071 | 3,050 | 2,934 | 3,397 | 3,444 | 4,029 | 4,156 | 5,506 | 46,861 |
| 1896.. | 4,943 | 6,445 | 8,182 | 4,674 | 4,838 | 3,926 | 4,048 | 2,968 | 4,686 | 4,544 | 4,654 | 5,290 | 59,198 |
| 1897.. | 5,501 | 4,493 | 5,363 | 5,523 | 5,603 | 4,208 | 4,007 | 3,452 | 3,506 | 3,938 | 4,558 | 4,068 | 54,220 |
| 1898.. | 3,494 | 3,699 | 3,864 | 5,477 | 4,769 | 4,162 | 3,377 | 3,111 | 2,787 | 3,999 | 4,856 | 4,830 | 48,425 |
| 1899.. | 4,926 | 4,427 | 5,275 | 3,984 | 4,219 | 3,814 | 3,891 | 2,522 | 3,967 | 2,582 | 3,361 | 4,142 | 47,110 |
| 1900.. | 4,904 | 5,016 | 5,602 | 5,039 | 4,381 | 4,101 | 3,701 | 2,322 | 3,042 | 3,315 | 4,877 | 4,203 | 50,503 |
| 1901.. | 5,224 | 5,484 | 5,482 | 6,211 | 4,525 | 3,647 | 2,763 | 2,144 | 2,358 | 3,652 | 4,583 | 4,280 | 50,353 |
| 1902.. | 4,078 | 5,199 | 6,601 | 4,642 | 4,328 | 4,102 | 2,929 | 2,386 | 2,680 | 4,398 | 3,077 | 4,018 | 48,438 |
| 1903.. | 4,254 | 4,529 | 4,169 | 5,125 | 3,908 | 3,130 | 3,087 | 2,105 | 2,890 | 4,703 | 3,362 | 4,994 | 46,256 |
| 1904.. | 4,112 | 4,910 | 4,444 | 4,902 | 3,830 | 3,127 | 3,268 | 3,232 | 3,602 | 4,160 | 3,470 | 3,940 | 46,994 |
| 1905.. | 5,180 | 4,503 | 3,006 | 4,855 | 5,004 | 3,108 | 3,464 | 3,030 | 2,527 | 3,397 | 4,317 | 4,051 | 46,442 |
| 1906.. | 5,706 | 4,565 | 5,686 | 4,777 | 3,766 | 1,409 | 3,773 | 3,412 | 4,249 | 4,398 | 5,978 | 5,554 | 53,273 |
| 1907.. | 4,987 | 5,272 | 5,718 | 7,096 | 5,946 | 4,223 | 4,114 | 3,928 | 3,582 | 5,111 | 4,773 | 5,266 | 60,016 |
| 1908.. | 7,770 | 5,511 | 5,759 | 8,208 | 5,818 | 4,571 | 3,815 | 3,802 | 3,757 | 3,643 | 5,485 | 5,432 | 63,571 |
| Mean. | 4,812 | 4,786 | 5,472 | 5,281 | 4,551 | 3,602 | 3,460 | 3,075 | 3,335 | 4,045 | 4,356 | 4,655 | 51,430 |

Maximum Wind Pressure.

(in Pounds per Square Ft.)

| YEAR. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Annual Maximum. |
|--------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|-----------------|
| 1889.. | 26.0 | 24.0 | 16.7 | 15.5 | 9.0 | 11.5 | 10.0 | 6.5 | 9.7 | 12.2 | 14.5 | 29.0 | 29.0 |
| 1890.. | 27.7 | 17.5 | 13.5 | 11.5 | 16.5 | 10.0 | 9.2 | 13.0 | 5.0 | 11.0 | 9.5 | 24.5 | 27.7 |
| 1891.. | 16.2 | 13.5 | 10.5 | 14.0 | 10.7 | 10.5 | 4.5 | 2.5 | 4.0 | 9.5 | 15.7 | 14.0 | 16.2 |
| 1892.. | 10.5 | 11.5 | 20.5 | 16.7 | 15.7 | 20.5 | 11.5 | 7.5 | 15.5 | 12.5 | 16.0 | 13.5 | 20.5 |
| 1893.. | 12.0 | 20.0 | 18.5 | 24.5 | 24.7 | 9.0 | 13.0 | 37.5 | 14.5 | 23.0 | 14.0 | 18.5 | 37.5 |
| 1894.. | 20.0 | 22.5 | 11.5 | 15.5 | 14.5 | 14.0 | 9.5 | 9.5 | 13.0 | 10.0 | 18.0 | 15.0 | 22.5 |
| 1895.. | 13.0 | 25.0 | 20.0 | 10.0 | 7.0 | 8.0 | 8.0 | 5.5 | 43.0 | 14.0 | 22.0 | 24.0 | 43.0 |
| 1896.. | 15.0 | 24.5 | 19.0 | 18.0 | 25.0 | 7.7 | 8.5 | 12.5 | 19.0 | 12.0 | 15.0 | 12.0 | 25.0 |
| 1897.. | 18.5 | 10.0 | 13.5 | 14.0 | 22.0 | 7.0 | 12.0 | 14.0 | 20.0 | 11.5 | 20.0 | 12.0 | 22.0 |
| 1898.. | 22.5 | 15.5 | 15.5 | 10.0 | 18.0 | 8.5 | 17.5 | 13.0 | 30.5 | 12.0 | 19.0 | 28.0 | 30.5 |
| 1899.. | 20.0 | 15.0 | 22.0 | 9.5 | 10.5 | 7.5 | 12.0 | 5.5 | 6.5 | 6.5 | 11.0 | 15.5 | 22.0 |
| 1900.. | 20.5 | 30.5 | 16.0 | 13.0 | 22.0 | 12.5 | 23.0 | 16.0 | 17.0 | 10.0 | 18.0 | 13.0 | 30.5 |
| 1901.. | 12.5 | 10.5 | 10.5 | 13.5 | 11.5 | 7.5 | 14.5 | 2.0 | 24.0 | 9.0 | 17.5 | 14.5 | 24.0 |
| 1902.. | 12.0 | 24.0 | 24.0 | 14.0 | 10.0 | 15.0 | 7.5 | 8.0 | 4.0 | 8.0 | 9.5 | 12.5 | 24.0 |
| 1903.. | 12.5 | 22.0 | 8.0 | 12.5 | 9.5 | 9.0 | 15.5 | 3.0 | 7.5 | 3.0 | 9.5 | 17.0 | 22.0 |
| 1904.. | 11.0 | 23.5 | 14.5 | 15.5 | 11.0 | 6.0 | 11.0 | 6.5 | 14.5 | 23.5 | 11.5 | 9.5 | 23.5 |
| 1905.. | 23.5 | 18.0 | 16.5 | 18.0 | 9.5 | 6.0 | 9.0 | 7.0 | 7.0 | 9.0 | 9.0 | 14.0 | 23.5 |
| 1906.. | 8.0 | 8.5 | 7.0 | 10.0 | 7.5 | 5.0 | 6.5 | 4.5 | 4.5 | 9.0 | 8.5 | 12.0 | 12.0 |
| 1907.. | 14.0 | 20.0 | 27.0 | 12.0 | 6.5 | 6.0 | 32.5 | 4.5 | 6.0 | 9.0 | 8.5 | 18.5 | 32.5 |
| 1708.. | 16.0 | 23.0 | 10.0 | 32.0 | 13.0 | 7.0 | 10.0 | 4.0 | 9.0 | 9.0 | 9.5 | 7.5 | 32.0 |
| M'x'm | 27.7 | 30.5 | 27.0 | 32.0 | 25.0 | 20.5 | 32.5 | 37.5 | 43.0 | 23.5 | 22.0 | 29.0 | 43.0 |

Maximum Velocity of Wind.

(in Miles per Hour.)

| YEAR. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Annual Maximum. |
|-----------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|-----------------|
| 1889..... | 72 | 69 | 58 | 56 | 42 | 48 | 45 | 36 | 44 | 50 | 54 | 76 | 76 |
| 1890..... | 74 | 59 | 52 | 48 | 57 | 45 | 43 | 51 | 32 | 47 | 44 | 70 | 74 |
| 1891..... | 57 | 52 | 46 | 53 | 46 | 46 | 30 | 23 | 28 | 44 | 56 | 53 | 57 |
| 1892..... | 46 | 48 | 64 | 58 | 56 | 64 | 48 | 39 | 56 | 50 | 57 | 52 | 64 |
| 1893..... | 49 | 63 | 61 | 70 | 70 | 42 | 51 | 87 | 54 | 68 | 53 | 61 | 87 |
| 1894..... | 63 | 67 | 48 | 56 | 54 | 53 | 44 | 44 | 51 | 45 | 60 | 55 | 67 |
| 1895..... | 51 | 71 | 63 | 45 | 37 | 40 | 40 | 33 | 93 | 53 | 66 | 69 | 93 |
| 1896..... | 55 | 70 | 62 | 60 | 71 | 39 | 41 | 50 | 62 | 49 | 55 | 49 | 71 |
| 1897..... | 61 | 45 | 52 | 53 | 66 | 37 | 49 | 53 | 63 | 48 | 63 | 49 | 66 |
| 1898..... | 67 | 56 | 56 | 45 | 60 | 41 | 59 | 51 | 78 | 49 | 62 | 75 | 78 |
| 1899..... | 64 | 55 | 66 | 44 | 46 | 39 | 49 | 33 | 36 | 36 | 47 | 56 | 66 |
| 1900..... | 64 | 78 | 57 | 51 | 66 | 50 | 68 | 57 | 60 | 45 | 60 | 51 | 78 |
| 1901..... | 49 | 46 | 46 | 52 | 48 | 39 | 54 | 20 | 69 | 42 | 59 | 54 | 69 |
| 1902..... | 49 | 69 | 69 | 53 | 45 | 55 | 39 | 40 | 28 | 40 | 44 | 50 | 69 |
| 1903..... | 50 | 66 | 40 | 50 | 44 | 43 | 56 | 24 | 39 | 40 | 44 | 58 | 66 |
| 1904..... | 47 | 69 | 54 | 56 | 47 | 35 | 47 | 36 | 54 | 69 | 48 | 44 | 69 |
| 1905..... | 69 | 60 | 57 | 60 | 44 | 35 | 43 | 37 | 37 | 43 | 43 | 53 | 69 |
| 1906..... | 45 | 41 | 37 | 45 | 39 | 32 | 36 | 30 | 30 | 42 | 41 | 49 | 49 |
| 1907..... | 53 | 63 | 74 | 49 | 36 | 35 | 81 | 30 | 35 | 42 | 41 | 61 | 81 |
| 1908.... | 56 | 68 | 45 | 80 | 51 | 37 | 45 | 28 | 42 | 42 | 44 | 39 | 80 |

Snow, Frost and Weather.

| YEAR. | Last Snow. | | First Snow. | | Total Snowfall. (inches). | Last Frost. | | First Frost. | | Number of Days on Precipitation. | Number of Clear Days. | Number of Fair Days. | Number of Cloudy Days. |
|----------------------|------------|-----|-------------|-----|------------------------------|-------------|-----|--------------|-----|-------------------------------------|-----------------------|----------------------|---------------------------|
| 1889.. | April | 2, | Oct. | 13, | 26.0 | May | 26, | Sept. | 21, | 119 | 94 | 110 | 161 |
| 1890.. | April | 8, | Oct. | 19, | 43.5 | May | 12, | Sept. | 25, | 141 | 137 | 105 | 123 |
| 1891.. | May | 5, | Nov. | 26, | 54.2 | May | 19, | Oct. | 12, | 112 | 145 | 103 | 117 |
| 1892.. | April | 10, | Nov. | 5, | 42.5 | May | 10, | Sept. | 30, | 108 | 123 | 109 | 134 |
| 1893 ⁶ .. | April | 21, | Nov. | 4, | 74.3 | May | 8, | Sept. | 3, | 143 | 101 | 96 | 168 |
| 1894.. | April | 12, | Nov. | 5, | 71.5 | May | 22, | Aug. | 22, | 125 | 107 | 83 | 175 |
| 1895.. | April | 3, | Oct. | 20, | 61.0 | May | 17, | Aug. | 22, | 119 | 118 | 110 | 137 |
| 1896.. | April | 7, | Nov. | 14, | 44.0 | May | 1, | Sept. | 24, | 108 | 132 | 192 | 132 |
| 1897.. | April | 27, | Nov. | 12, | 52.8 | May | 8, | Sept. | 22, | 127 | 108 | 109 | 148 |
| 1898.. | April | 6, | Nov. | 24, | 69.5 | April | 27, | Sept. | 21, | 125 | 78 | 138 | 149 |
| 1899.. | April | 16, | Oct. | 12, | 52.0 | May | 4, | Sept. | 14, | 110 | 91 | 139 | 135 |
| 1900.. | April | 9, | Nov. | 9, | 37.0 | May | 29, | Sept. | 15, | 131 | 83 | 144 | 138 |
| 1901.. | April | 3, | Nov. | 11, | 52.3 | May | 6, | Sept. | 26, | 135 | 81 | 105 | 179 |
| 1902.. | April | 2, | Oct. | 29, | 57.0 | May | 14, | Sept. | 6, | 144 | 73 | 113 | 179 |
| 1903.. | April | 4, | Oct. | 26, | 33.5 | May | 2, | Sept. | 25, | 116 | 119 | 98 | 148 |
| 1904.. | April | 20, | Oct. | 12, | 59.5 | April | 23, | Sept. | 22, | 126 | 142 | 96 | 128 |
| 1905.. | May | 1, | Nov. | 9, | 40.0 | May | 24, | Sept. | 15, | 122 | 130 | 128 | 107 |
| 1906.. | April | 23, | Nov. | 11, | 56.2 | May | 20, | Sept. | 25, | 121 | 130 | 140 | 95 |
| 1907.. | May | 11, | Nov. | 24, | 54.5 | May | 22, | Sept. | 27, | 122 | 95 | 155 | 115 |
| 1908.. | April | 20, | Nov. | 5, | 38.5 | June | 3, | Sept. | 16, | 109 | 143 | 130 | 93 |

Summary for the Twenty Years 1889-1908.

Barometer (Pressure in Inches).

| | |
|---|--------|
| Maximum, reduced to freezing, Feb. 26, 1889., 11 A. M. | 30.650 |
| Minimum, reduced to freezing, Feb. 8, 1895, 7 A. M. | 28.240 |
| Maximum, reduced to freezing and sea level, Feb. 26, 1889, 11 A. M. | 30.970 |
| Minimum, reduced to freezing and sea level, Feb. 8, 1895, 7 A. M. | 28.560 |
| Mean | 30.009 |
| Total range | 2.410 |
| Greatest annual range, 1895 | 2.270 |
| Least annual range, 1905 | 1.640 |
| Mean annual range | 1.880 |
| Greatest monthly range, January, 1891 | 1.930 |
| Least monthly range, August, 1894 | .440 |
| Mean monthly range | 1.100 |

Air Temperature (in Degrees F.)

| | |
|---|-------|
| Highest, July 2, 1901, 1:30 P. M. | 100.5 |
| Lowest, Jan. 5, 1904, 7:30 A. M. | -26.0 |
| Mean | 46.8 |
| Total range | 126.5 |
| Greatest annual range, 1903 | 120.5 |
| Least annual range, 1905 | 98.5 |
| Mean annual range | 108.9 |
| Greatest monthly range, Jan., 1907 | 78.0 |
| Least monthly range, Aug., 1901 | 33.5 |
| Mean monthly range | 54.8 |
| Greatest daily range, Dec. 10, 1902 | 54.0 |
| Least daily range, June 2, 1907 | 2.0 |

Humidity.

| | |
|------------------------------|------|
| Mean dew point | 39.1 |
| Mean relative humidity | 74.1 |

Precipitation (in Inches).

| | |
|--|---------|
| Total rain or melted snow..... | 896.84 |
| Total snowfall | 1,019.9 |
| Greatest annual precipitation, 1897..... | 57.05 |
| Least annual precipitation, 1908..... | 30.68 |
| Mean annual precipitation..... | 44.84 |
| Greatest monthly precipitation, July, 1899 | 14.51 |
| Least monthly precipitation, Aug., 1894 | .31 |
| Mean monthly precipitation..... | 3.74 |

Wind (in Miles).

| | |
|--|-----------|
| Total movement..... | 1,028,604 |
| Greatest annual movement, 1908 ... | 63,571 |
| Least annual movement, 1894..... | 36,257 |
| Mean annual movement..... | 51,430 |
| Greatest monthly movement, April, 1908..... | 8,208 |
| Least monthly movement, July, 1894..... | 1,109 |
| Mean monthly movement..... | 4,286 |
| Greatest daily movement, Nov. 27, 1898 | 675 |
| Least daily movement, Sept. 29, 1894, March 7, 1890, Jan. 6, 1904..... | 0 |
| Mean daily movement | 141 |
| Maximum pressure per square foot, 43 pounds, = 93 miles per hour, Sept. 11, 1895, 3 P. M. | |

Weather.

| | |
|---|-----------------|
| Mean cloudiness observed..... | 52.35 per cent. |
| Total cloudiness by the sun thermometer | 49.5 " |
| Number of clear days..... | 2,230 |
| Number of fair days..... | 2,313 |
| Number of cloudy days | 2,761 |

Gales of 75 or more miles per hour: 1889, Dec. 26, 76, N.W.; 1893, Aug. 29, 87, S.W.; 1895, Sept. 11, 93, N.E.; 1898, Sept. 7, 78, S.W.; Dec. 4, 75, E.S.E.; 1900, Feb. 22, 78, W.N.W.; 1907, July 20, 81, W.; 1908, April 11, 80, N.N.W.

The following summary was abstracted from meteorological records taken in Amherst prior to the establishment of the meteorological observatory at the college in 1889.

The records from 1836 to 1883 are from the observations of the late Prof. E. S. Snell of Amherst College. These records were taken at his house, about one and a half miles south of the location of the meteorological observatory at the Massachusetts Agricultural College, and at practically the same elevation above sea level.

The precipitation records are believed to be fairly comparable with the records of this station, although perhaps slightly affected by the difference of topography surrounding the two places. As Prof. Snell changed his time of taking temperatures and used different methods of deducing the mean temperatures, in conformity with the current practices at different dates, the comparison with those of this station should be made with more caution. The maximum and minimum temperatures of the earlier years were not all taken with self-registering instruments, and this fact should be taken into consideration when comparisons are made.

The records from 1883 to 1889 were taken at the State Experiment Station, on the college grounds, under the direction of Dr. C. A. Goessmann, at that time the director of the State Agricultural Experiment Station, and are fairly comparable with the records of that station.

Mean temperature for 72 years :

$$\frac{46.8 \times 20 + 46.7 \times 52}{72} = 46.7 \text{ degrees.}$$

Mean precipitation for 73 years :

$$\frac{44.36 \times 53 + 44.84 \times 20}{73} = 44.49 \text{ inches.}$$

Record of the Rainfall in Inches.

From 1836 to 1888, inclusive.

| Year. | Jan. | Feb. | Mar. | April | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Ann'l |
|--------|------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| 1836.. | 4.21 | 3.83 | 3.13 | 1.98 | 2.59 | 3.45 | 6.02 | 0.96 | 2.28 | 3.02 | 3.49 | 5.80 | 40.76 |
| 1837.. | 1.75 | 2.42 | 2.65 | 4.33 | 5.76 | 4.49 | 7.35 | 2.57 | 1.07 | 2.06 | 1.90 | 2.35 | 38.70 |
| 1838.. | 2.45 | 1.67 | 1.69 | 2.02 | 3.63 | 4.90 | 2.27 | 3.95 | 6.38 | 4.12 | 5.77 | 0.96 | 39.81 |
| 1839.. | 1.66 | 1.75 | 1.69 | 4.14 | 3.49 | 3.30 | 9.56 | 2.51 | 2.82 | 1.78 | 3.04 | 7.09 | 42.83 |
| 1840.. | 3.15 | 2.03 | 3.18 | 3.98 | 1.91 | 4.60 | 3.34 | 6.82 | 5.20 | 5.04 | 4.61 | 3.15 | 47.01 |
| 1841.. | 5.80 | 1.50 | 2.85 | 4.52 | 3.47 | 1.65 | 2.55 | 3.18 | 3.50 | 3.73 | 2.80 | 6.08 | 41.63 |
| 1842.. | 1.02 | 3.78 | 2.39 | 2.92 | 2.40 | 3.18 | 1.95 | 7.42 | 3.23 | 2.84 | 3.73 | 3.19 | 38.05 |
| 1843.. | 1.99 | 3.49 | 5.73 | 4.82 | 2.09 | 5.18 | 2.53 | 9.38 | 1.57 | 9.45 | 3.07 | 2.28 | 51.58 |
| 1844.. | 3.44 | 2.18 | 4.12 | 0.57 | 5.59 | 3.00 | 3.81 | 4.93 | 1.84 | 6.49 | 2.12 | 2.49 | 40.58 |
| 1845.. | 4.97 | 3.37 | 3.56 | 1.70 | 2.42 | 2.57 | 3.31 | 2.79 | 2.58 | 4.66 | 3.90 | 3.91 | 39.74 |
| 1846.. | 2.74 | 2.55 | 4.35 | 1.54 | 4.33 | 3.10 | 3.25 | 2.44 | 0.47 | 2.09 | 4.96 | 3.10 | 34.92 |
| 1847.. | 4.86 | 4.88 | 3.57 | 1.41 | 1.91 | 4.44 | 4.48 | 4.06 | 3.63 | 3.99 | 4.17 | 6.41 | 47.81 |
| 1848.. | 2.92 | 2.60 | 3.03 | 1.55 | 6.18 | 2.58 | 4.72 | 1.53 | 2.49 | 3.15 | 3.09 | 5.54 | 39.38 |
| 1849.. | 0.99 | 0.99 | 4.21 | 2.24 | 3.61 | 1.53 | 2.25 | 7.86 | 1.40 | 6.36 | 3.65 | 3.36 | 38.45 |
| 1850.. | 4.75 | 3.56 | 1.86 | 3.93 | 8.72 | 2.88 | 6.81 | 6.50 | 4.93 | 3.65 | 2.63 | 5.37 | 55.59 |
| 1851.. | 1.66 | 5.07 | 1.28 | 4.43 | 4.07 | 3.69 | 4.31 | 3.03 | 2.05 | 5.43 | 5.30 | 3.17 | 43.50 |
| 1852.. | 2.42 | 3.35 | 3.26 | 4.71 | 2.30 | 2.54 | 3.38 | 5.19 | 2.48 | 1.76 | 6.43 | 4.88 | 42.70 |
| 1853.. | 2.11 | 6.69 | 2.39 | 3.79 | 5.40 | 2.64 | 3.59 | 7.13 | 5.66 | 3.75 | 6.24 | 1.84 | 51.23 |
| 1854.. | 2.01 | 4.53 | 3.11 | 8.33 | 3.19 | 1.75 | 3.53 | 0.99 | 5.46 | 2.31 | 7.48 | 2.39 | 45.08 |
| 1855.. | 5.06 | 2.70 | 1.08 | 3.85 | 1.49 | 5.19 | 6.10 | 2.55 | 0.55 | 10.08 | 4.12 | 5.41 | 48.18 |
| 1856.. | 2.48 | 0.79 | 1.12 | 2.51 | 5.31 | 1.92 | 1.96 | 12.13 | 3.47 | 1.40 | 2.85 | 4.19 | 40.13 |
| 1857.. | 3.55 | 2.41 | 2.12 | 7.68 | 6.82 | 2.66 | 4.98 | 3.14 | 3.04 | 3.88 | 2.07 | 5.31 | 47.66 |
| 1858.. | 3.52 | 1.60 | 0.80 | 3.20 | 2.98 | 4.62 | 6.73 | 4.82 | 4.14 | 3.86 | 2.16 | 3.16 | 41.59 |
| 1859.. | 4.89 | 3.54 | 6.27 | 2.96 | 4.08 | 6.16 | 2.61 | 6.65 | 4.47 | 1.85 | 2.96 | 4.85 | 51.29 |
| 1860.. | 1.21 | 2.93 | 1.58 | 1.28 | 4.57 | 3.57 | 6.13 | 2.68 | 6.12 | 2.18 | 3.52 | 3.84 | 39.61 |
| 1861.. | 4.34 | 3.28 | 3.76 | 5.65 | 4.45 | 2.69 | 5.23 | 4.10 | 2.75 | 4.53 | 3.93 | 2.17 | 46.88 |
| 1862.. | 5.25 | 2.84 | 4.20 | 2.28 | 2.33 | 11.69 | 5.12 | 2.98 | 2.12 | 3.28 | 4.76 | 1.91 | 48.86 |
| 1863.. | 5.05 | 4.43 | 5.60 | 2.33 | 3.59 | 4.09 | 8.64 | 6.11 | 2.16 | 4.04 | 5.28 | 4.87 | 56.19 |
| 1864.. | 2.20 | 1.12 | 2.58 | 2.57 | 2.54 | 1.38 | 0.96 | 4.40 | 2.92 | 2.94 | 6.20 | 4.63 | 34.44 |
| 1865.. | 3.48 | 2.88 | 5.98 | 2.90 | 7.89 | 2.94 | 3.72 | 1.86 | 0.37 | 4.98 | 2.45 | 3.54 | 42.99 |
| 1866.. | 1.36 | 4.62 | 3.16 | 2.03 | 4.48 | 5.66 | 4.02 | 3.96 | 4.71 | 3.38 | 3.86 | 3.57 | 44.81 |
| 1867.. | 1.32 | 3.65 | 3.12 | 3.79 | 4.61 | 5.67 | 4.00 | 9.16 | 1.11 | 3.85 | 4.31 | 1.51 | 46.10 |
| 1868.. | 3.52 | 1.03 | 3.25 | 4.27 | 7.66 | 2.44 | 3.28 | 5.67 | 10.63 | 1.37 | 4.80 | 1.47 | 49.59 |
| 1869.. | 3.47 | 4.14 | 5.46 | 1.53 | 5.65 | 5.99 | 2.98 | 1.04 | 4.32 | 11.36 | 2.59 | 4.96 | 53.49 |
| 1870.. | 5.87 | 5.25 | 2.71 | 3.70 | 1.72 | 2.73 | 2.53 | 2.83 | 1.75 | 4.49 | 3.28 | 1.84 | 38.70 |
| 1871.. | 1.96 | 2.91 | 3.99 | 3.09 | 3.82 | 6.58 | 3.52 | 6.45 | 1.30 | 6.09 | 3.51 | 2.67 | 45.89 |
| 1872.. | 1.51 | 1.89 | 2.87 | 2.20 | 3.11 | 3.25 | 7.07 | 5.28 | 6.20 | 3.64 | 4.48 | 2.69 | 44.19 |
| 1873.. | 5.01 | 2.17 | 3.13 | 1.74 | 3.91 | 1.59 | 2.93 | 3.47 | 4.77 | 6.36 | 3.51 | 3.31 | 41.90 |
| 1874.. | 5.46 | 2.19 | 1.35 | 6.03 | 5.22 | 5.06 | 11.58 | 2.69 | 1.82 | 1.85 | 3.54 | 1.17 | 47.96 |
| 1875.. | 2.90 | 3.62 | 4.20 | 3.33 | 2.19 | 2.89 | 8.15 | 6.17 | 4.65 | 3.89 | 3.97 | 1.03 | 46.99 |
| 1876.. | 2.31 | 5.53 | 7.14 | 3.11 | 3.96 | 3.87 | 4.84 | 0.27 | 3.71 | 1.12 | 2.49 | 3.22 | 41.57 |
| 1877.. | 2.52 | 0.36 | 6.97 | 2.45 | 1.93 | 4.59 | 6.47 | 2.79 | 0.91 | 6.99 | 5.44 | 1.02 | 42.44 |
| 1878.. | 3.58 | 3.67 | 2.57 | 5.85 | 2.36 | 6.00 | 2.16 | 6.97 | 2.82 | 2.05 | 5.34 | 6.02 | 49.39 |
| 1879.. | 1.75 | 3.49 | 2.98 | 3.85 | 3.32 | 5.37 | 5.75 | 5.89 | 2.59 | 1.80 | 2.35 | 4.85 | 45.99 |
| 1880.. | 4.58 | 3.60 | 2.68 | 2.64 | 1.90 | 1.40 | 6.34 | 2.91 | 2.69 | 2.27 | 2.50 | 2.29 | 35.80 |
| 1881.. | 4.01 | 1.77 | 4.86 | 1.65 | 4.28 | 3.95 | 1.50 | 2.76 | 2.37 | 4.24 | 4.58 | 6.15 | 42.12 |
| 1882.. | 5.44 | 4.23 | 5.20 | 1.52 | 6.50 | 2.25 | 1.83 | 0.25 | 11.85 | 1.67 | 1.33 | 1.47 | 43.54 |
| 1883.. | 3.24 | 4.03 | 1.70 | 2.18 | 6.20 | 3.99 | 3.69 | 1.57 | 3.17 | 4.31 | 1.80 | 2.99 | 38.87 |
| 1884.. | 3.60 | 4.62 | 5.67 | 2.48 | 2.02 | 1.38 | 3.75 | 5.10 | 1.25 | 2.40 | 2.53 | 5.58 | 40.38 |
| 1885.. | 3.78 | 3.88 | 0.86 | 3.38 | 3.08 | 3.49 | 2.07 | 8.31 | 0.85 | 3.65 | 5.54 | 3.54 | 42.43 |
| 1886.. | 5.39 | 3.94 | 3.31 | 1.73 | 3.10 | 2.33 | 3.82 | 2.60 | 5.48 | 2.97 | 5.25 | 3.61 | 43.53 |
| 1887.. | 4.57 | 5.05 | 4.05 | 2.98 | 1.13 | 5.09 | 8.93 | 7.75 | 1.22 | 2.10 | 3.35 | 4.11 | 50.33 |
| 1888.. | 3.87 | 3.94 | 5.96 | 3.08 | 4.29 | 5.40 | 3.63 | 4.29 | 10.70 | 5.19 | 3.91 | 3.78 | 58.04 |
| Mean. | 3.34 | 3.18 | 3.44 | 3.18 | 3.88 | 3.76 | 4.45 | 4.39 | 3.43 | 3.88 | 3.83 | 3.59 | 44.36 |

Record of the Mean Temperature.
From 1837 to 1888, inclusive.

| Year. | Jan. | Feb. | Mar. | April. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Ann'l |
|--------|------|------|------|--------|------|-------|-------|------|-------|------|------|------|-------|
| 1837.. | 20.3 | 26.7 | 33.7 | 47.4 | 57.9 | 68.2 | 70.6 | 68.6 | 61.4 | 50.0 | 40.2 | 27.6 | 47.7 |
| 1838.. | 32.0 | 19.6 | 36.4 | 40.7 | 54.3 | 68.6 | 71.9 | 68.2 | 62.7 | 46.5 | 34.1 | 23.5 | 46.5 |
| 1839.. | 24.6 | 29.8 | 37.5 | 52.2 | 60.7 | 65.4 | 74.4 | 70.7 | 63.5 | 53.3 | 36.6 | 28.9 | 49.8 |
| 1840.. | 14.4 | 28.5 | 35.0 | 49.0 | 57.1 | 65.5 | 70.6 | 70.3 | 57.2 | 47.4 | 37.0 | 23.6 | 46.3 |
| 1841.. | 25.6 | 20.2 | 31.9 | 41.6 | 54.4 | 68.4 | 69.5 | 69.8 | 61.2 | 42.8 | 35.3 | 29.5 | 45.8 |
| 1842.. | 25.6 | 30.5 | 37.7 | 46.5 | 52.7 | 64.1 | 71.5 | 69.0 | 57.4 | 47.4 | 35.1 | 24.2 | 46.8 |
| 1843.. | 29.7 | 16.5 | 24.5 | 44.6 | 56.0 | 65.3 | 68.8 | 69.8 | 61.7 | 45.0 | 34.0 | 28.0 | 45.3 |
| 1844.. | 13.9 | 22.1 | 35.5 | 52.0 | 57.8 | 65.6 | 68.2 | 68.0 | 59.6 | 47.6 | 35.7 | 27.3 | 46.0 |
| 1845.. | 24.5 | 24.9 | 36.9 | 45.6 | 56.2 | 66.7 | 72.1 | 71.5 | 58.3 | 49.6 | 41.5 | 21.5 | 47.4 |
| 1846.. | 24.8 | 20.1 | 36.3 | 50.1 | 58.3 | 65.0 | 70.7 | 69.6 | 65.5 | 47.6 | 43.0 | 25.3 | 48.0 |
| 1847.. | 25.5 | 24.7 | 29.2 | 43.3 | 57.5 | 64.7 | 72.4 | 69.3 | 59.3 | 46.0 | 43.2 | 24.2 | 47.4 |
| 1848.. | 29.0 | 23.7 | 32.6 | 43.3 | 59.5 | 67.6 | 69.4 | 70.6 | 57.4 | 47.3 | 33.5 | 30.6 | 47.0 |
| 1849.. | 20.0 | 18.5 | 35.6 | 43.5 | 53.4 | 66.9 | 72.1 | 68.8 | 60.0 | 47.0 | 44.1 | 28.4 | 46.5 |
| 1850.. | 25.9 | 28.4 | 32.4 | 42.9 | 53.4 | 67.3 | 72.1 | 67.1 | 59.4 | 48.2 | 40.0 | 23.4 | 46.7 |
| 1851.. | 23.8 | 27.9 | 35.5 | 46.2 | 55.6 | 69.6 | 69.2 | 66.2 | 60.9 | 51.0 | 34.5 | 20.2 | 46.2 |
| 1852.. | 19.6 | 25.2 | 30.9 | 39.4 | 56.0 | 65.4 | 70.0 | 65.2 | 58.4 | 49.3 | 36.4 | 32.8 | 45.7 |
| 1853.. | 24.3 | 26.7 | 33.8 | 44.0 | 56.7 | 67.0 | 68.7 | 67.8 | 59.5 | 46.8 | 39.1 | 26.3 | 46.7 |
| 1854.. | 22.8 | 22.0 | 31.6 | 43.5 | 59.5 | 66.7 | 74.1 | 68.8 | 61.5 | 51.5 | 40.3 | 22.3 | 47.0 |
| 1855.. | 27.3 | 19.8 | 31.5 | 43.8 | 56.6 | 65.0 | 70.9 | 65.5 | 60.8 | 49.7 | 38.8 | 28.2 | 46.5 |
| 1856.. | 15.2 | 19.0 | 25.9 | 40.4 | 53.6 | 68.6 | 72.9 | 66.2 | 60.8 | 48.7 | 37.5 | 23.2 | 44.8 |
| 1857.. | 13.5 | 31.4 | 31.1 | 41.0 | 55.2 | 63.6 | 70.9 | 67.2 | 59.9 | 48.9 | 39.5 | 31.5 | 46.1 |
| 1858.. | 28.8 | 20.6 | 31.3 | 44.4 | 54.1 | 66.1 | 69.8 | 67.9 | 50.9 | 51.4 | 33.9 | 25.7 | 45.4 |
| 1859.. | 22.9 | 25.6 | 36.7 | 43.4 | 59.2 | 62.8 | 67.7 | 66.4 | 57.1 | 45.7 | 41.1 | 23.0 | 46.0 |
| 1860.. | 26.5 | 24.8 | 37.2 | 44.0 | 57.3 | 65.2 | 66.4 | 68.0 | 56.8 | 48.8 | 42.7 | 23.9 | 46.8 |
| 1861.. | 20.4 | 29.2 | 32.5 | 45.5 | 53.4 | 65.5 | 69.5 | 65.7 | 59.9 | 51.5 | 37.8 | 29.0 | 46.7 |
| 1862.. | 22.3 | 22.1 | 32.2 | 43.6 | 58.1 | 63.4 | 68.0 | 68.1 | 61.1 | 51.0 | 39.6 | 27.6 | 46.4 |
| 1863.. | 29.1 | 26.3 | 26.1 | 45.5 | 55.4 | 59.0 | 70.9 | 70.1 | 57.4 | 49.9 | 41.1 | 25.3 | 46.3 |
| 1864.. | 24.4 | 28.5 | 34.4 | 43.5 | 60.4 | 65.7 | 71.5 | 70.8 | 57.8 | 46.4 | 38.0 | 38.2 | 48.3 |
| 1865.. | 18.7 | 25.0 | 37.1 | 49.0 | 57.1 | 69.3 | 69.1 | 68.6 | 65.6 | 46.0 | 39.9 | 28.9 | 47.8 |
| 1866.. | 21.9 | 26.2 | 31.6 | 48.6 | 54.6 | 65.8 | 72.9 | 63.5 | 60.0 | 49.5 | 40.1 | 26.3 | 46.7 |
| 1867.. | 18.3 | 31.2 | 30.8 | 45.5 | 54.0 | 67.1 | 68.1 | 68.6 | 60.0 | 49.9 | 37.9 | 22.6 | 46.2 |
| 1868.. | 20.2 | 18.2 | 33.8 | 42.0 | 55.1 | 66.2 | 74.0 | 69.0 | 59.5 | 45.3 | 36.5 | 22.8 | 45.2 |
| 1869.. | 28.0 | 28.0 | 27.3 | 46.4 | 55.9 | 64.7 | 69.1 | 66.9 | 62.1 | 46.7 | 35.9 | 27.5 | 46.5 |
| 1870.. | 30.8 | 25.3 | 30.9 | 48.3 | 58.3 | 70.4 | 73.6 | 71.1 | 62.3 | 52.0 | 39.1 | 28.0 | 49.2 |
| 1871.. | 23.3 | 26.0 | 40.5 | 48.0 | 57.8 | 65.4 | 69.2 | 68.9 | 52.8 | 51.0 | 34.0 | 24.6 | 46.8 |
| 1872.. | 25.1 | 24.2 | 25.3 | 45.0 | 59.1 | 68.1 | 72.6 | 71.6 | 61.7 | 48.2 | 36.4 | 19.5 | 46.4 |
| 1873.. | 20.6 | 24.0 | 30.6 | 43.2 | 54.6 | 67.5 | 71.3 | 67.0 | 60.4 | 49.9 | 29.7 | 29.2 | 45.7 |
| 1874.. | 28.2 | 24.5 | 32.9 | 38.3 | 56.5 | 66.2 | 67.2 | 65.6 | 62.0 | 47.6 | 36.2 | 29.2 | 46.2 |
| 1875.. | 16.7 | 17.5 | 27.8 | 40.8 | 57.1 | 65.8 | 69.3 | 68.9 | 57.3 | 47.9 | 33.1 | 28.3 | 44.2 |
| 1876.. | 29.8 | 26.4 | 31.6 | 43.6 | 57.5 | 70.6 | 74.2 | 70.5 | 59.1 | 45.5 | 40.5 | 19.7 | 47.4 |
| 1877.. | 20.0 | 30.8 | 33.3 | 47.8 | 58.5 | 67.8 | 71.1 | 71.4 | 63.3 | 50.5 | 41.9 | 33.1 | 49.1 |
| 1878.. | 25.3 | 27.1 | 39.2 | 52.2 | 57.4 | 64.7 | 73.3 | 68.6 | 63.2 | 54.4 | 39.1 | 29.0 | 49.5 |
| 1879.. | 21.6 | 22.4 | 33.0 | 43.2 | 60.6 | 66.3 | 71.0 | 67.2 | 59.0 | 56.0 | 37.4 | 30.8 | 47.4 |
| 1880.. | 31.6 | 29.1 | 33.5 | 47.5 | 64.2 | 68.5 | 71.8 | 67.5 | 63.2 | 47.3 | 34.9 | 22.8 | 48.5 |
| 1881.. | 17.9 | 24.9 | 36.2 | 43.6 | 61.7 | 62.8 | 70.6 | 70.5 | 67.4 | 52.5 | 40.3 | 36.0 | 48.7 |
| 1882.. | 23.6 | 28.2 | 35.1 | 44.3 | 52.9 | 66.8 | 71.9 | 70.9 | 63.2 | 52.7 | 36.4 | 26.6 | 47.7 |
| 1883.. | 21.0 | 25.0 | 27.3 | 44.3 | 58.6 | 69.7 | 70.4 | 66.4 | 59.4 | 46.8 | 40.4 | 27.0 | 46.4 |
| 1884.. | 21.6 | 30.9 | 32.9 | 46.7 | 57.4 | 69.0 | 68.6 | 69.2 | 64.4 | 50.3 | 38.4 | 30.0 | 48.3 |
| 1885.. | 22.7 | 15.2 | 23.3 | 45.3 | 54.8 | 63.8 | 70.4 | 66.0 | 58.3 | 49.1 | 39.8 | 29.6 | 44.9 |
| 1886.. | 21.8 | 35.1 | 33.5 | 50.4 | 57.3 | 63.2 | 68.8 | 66.3 | 59.5 | 48.9 | 38.3 | 23.0 | 46.2 |
| 1887.. | 19.4 | 24.2 | 26.4 | 41.6 | 60.9 | 65.7 | 73.7 | 64.9 | 55.9 | 47.0 | 36.5 | 26.6 | 45.2 |
| 1888.. | 13.8 | 22.0 | 26.8 | 40.4 | 54.7 | 65.8 | 67.2 | 67.4 | 57.1 | 43.1 | 38.9 | 30.4 | 44.0 |
| Mean. | 23.0 | 24.7 | 32.4 | 45.1 | 56.9 | 66.1 | 70.7 | 68.3 | 60.1 | 48.7 | 38.0 | 27.0 | 46.7 |

Record of the Maximum Temperature.
From 1838 to 1888, inclusive.

| Year. | Jan. | Feb. | Mar. | April. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Ann'l |
|--------|------|------|------|--------|------|-------|-------|------|-------|------|------|------|-------|
| 1838.. | 55.0 | 42.0 | 58.0 | 67.0 | 80.0 | 90.0 | 92.0 | 88.0 | 85.0 | 77.0 | 57.0 | 43.0 | 92.0 |
| 1839.. | 50.0 | 50.0 | 65.0 | 72.0 | 80.0 | 84.0 | 86.0 | 85.0 | 80.0 | 70.0 | 56.0 | 53.0 | 86.0 |
| 1840.. | 38.0 | 56.0 | 64.0 | 79.0 | 88.0 | 88.0 | 94.0 | 90.0 | 77.0 | 72.0 | 55.0 | 44.0 | 94.0 |
| 1841.. | 50.0 | 44.0 | 60.0 | 67.0 | 81.0 | 90.0 | 94.0 | 88.0 | 84.0 | 64.0 | 68.0 | 44.0 | 94.0 |
| 1842.. | 37.0 | 55.0 | 68.0 | 82.0 | 78.0 | 84.0 | 90.0 | 82.0 | 84.0 | 70.0 | 60.0 | 43.0 | 90.0 |
| 1843.. | 50.0 | 37.0 | 42.0 | 70.0 | 82.0 | 86.0 | 91.0 | 84.0 | 87.0 | 69.0 | 57.0 | 40.0 | 91.0 |
| 1844.. | 39.0 | 49.0 | 56.0 | 83.0 | 84.0 | 86.0 | 86.0 | 84.0 | 83.0 | 70.0 | 54.0 | 45.0 | 86.0 |
| 1845.. | 46.0 | 55.0 | 71.0 | 77.0 | 88.0 | 90.0 | 94.0 | 89.0 | 81.0 | 74.0 | 65.0 | 38.0 | 94.0 |
| 1846.. | 45.0 | 40.0 | 59.0 | 76.0 | 83.0 | 87.0 | 93.0 | 90.0 | 88.0 | 81.0 | 61.0 | 45.0 | 93.0 |
| 1847.. | 44.0 | 47.0 | 52.0 | 77.0 | 84.0 | 88.0 | 91.0 | 85.0 | 85.0 | 67.0 | 70.0 | 59.0 | 91.0 |
| 1848.. | 56.0 | 43.0 | 64.0 | 74.0 | 86.0 | 90.0 | 87.0 | 87.0 | 81.0 | 70.0 | 52.0 | 58.0 | 90.0 |
| 1849.. | 46.0 | 43.0 | 60.0 | 68.0 | 83.0 | 92.0 | 93.0 | 83.0 | 70.0 | 68.0 | 63.0 | 43.0 | 93.0 |
| 1850.. | 45.0 | 52.0 | 60.0 | 70.0 | 73.0 | 90.0 | 87.0 | 87.0 | 80.0 | 67.0 | 63.0 | 49.0 | 90.0 |
| 1851.. | 48.0 | 48.0 | 73.0 | 67.0 | 82.0 | 88.0 | 87.0 | 83.0 | 80.0 | 73.0 | 56.0 | 44.0 | 88.0 |
| 1852.. | 43.2 | 47.4 | 53.0 | 61.0 | 79.0 | 84.0 | 90.0 | 85.7 | 85.0 | 70.0 | 50.8 | 56.0 | 90.0 |
| 1853.. | 45.0 | 51.0 | 56.4 | 76.3 | 84.2 | 91.3 | 85.1 | 91.7 | 84.7 | 69.0 | 59.5 | 42.8 | 91.7 |
| 1854.. | 50.4 | 45.0 | 65.4 | 70.6 | 79.0 | 87.5 | 97.0 | 88.5 | 90.0 | 75.8 | 66.0 | 41.5 | 97.0 |
| 1855.. | 48.0 | 42.0 | 57.8 | 76.0 | 81.0 | 92.0 | 91.6 | 84.5 | 85.0 | 73.0 | 63.0 | 46.2 | 92.0 |
| 1856.. | 34.8 | 38.6 | 44.9 | 76.7 | 89.0 | 94.0 | 95.0 | 87.3 | 78.9 | 75.5 | 61.0 | 41.8 | 95.0 |
| 1857.. | 37.1 | 61.8 | 54.5 | 58.3 | 86.4 | 86.9 | 90.3 | 90.3 | 85.7 | 73.0 | 67.0 | 52.0 | 90.3 |
| 1858.. | 51.4 | 47.1 | 57.7 | 68.1 | 74.2 | 90.3 | 92.0 | 79.0 | 85.2 | 73.0 | 59.0 | 42.8 | 92.0 |
| 1859.. | 39.4 | 44.1 | 56.6 | 71.0 | 86.0 | 91.5 | 90.0 | 81.8 | 73.8 | 75.0 | 65.8 | 62.9 | 91.5 |
| 1860.. | 50.3 | 52.0 | 71.3 | 68.3 | 81.0 | 83.0 | 84.0 | 84.4 | 79.0 | 69.9 | 66.7 | 37.5 | 84.4 |
| 1861.. | 38.0 | 53.5 | 56.3 | 80.3 | 77.2 | 84.0 | 91.7 | 90.0 | 82.3 | 75.5 | 64.0 | 51.4 | 91.7 |
| 1862.. | 42.9 | 40.0 | 44.5 | 72.9 | 84.0 | 86.0 | 90.0 | 88.0 | 80.0 | 83.0 | 68.2 | 52.0 | 90.0 |
| 1863.. | 52.0 | 45.3 | 47.3 | 77.0 | 88.0 | 85.6 | 85.5 | 90.0 | 80.0 | 71.0 | 65.4 | 51.5 | 90.0 |
| 1864.. | 44.2 | 46.8 | 53.8 | 64.8 | 86.0 | 93.5 | 91.9 | 98.0 | 80.0 | 68.7 | 62.0 | 49.4 | 98.0 |
| 1865.. | 39.5 | 45.4 | 63.7 | 79.5 | 85.8 | 87.0 | 85.4 | 90.0 | 80.0 | 72.0 | 68.0 | 54.9 | 90.0 |
| 1866.. | 40.0 | 55.0 | 55.8 | 84.2 | 80.0 | 90.1 | 94.0 | 81.6 | 83.1 | 73.0 | 60.8 | 51.2 | 94.0 |
| 1867.. | 33.5 | 50.0 | 53.0 | 66.0 | 75.5 | 85.0 | 90.0 | 83.5 | 80.0 | 76.0 | 65.0 | 46.0 | 90.0 |
| 1868.. | 39.5 | 45.0 | 59.8 | 67.5 | 75.0 | 88.7 | 94.5 | 85.0 | 79.5 | 68.0 | 58.0 | 42.7 | 94.5 |
| 1869.. | 49.0 | 50.6 | 53.8 | 74.0 | 83.0 | 80.7 | 89.9 | 87.2 | 85.0 | 71.4 | 56.9 | 45.3 | 89.9 |
| 1870.. | 54.3 | 55.0 | 50.5 | 78.0 | 82.4 | 93.0 | 91.2 | 91.3 | 83.5 | 71.5 | 61.0 | 47.0 | 93.0 |
| 1871.. | 50.0 | 50.6 | 55.5 | 74.8 | 92.8 | 88.2 | 85.6 | 85.0 | 78.0 | 73.1 | 62.0 | 43.3 | 92.8 |
| 1872.. | 42.9 | 50.0 | 44.0 | 84.0 | 84.1 | 91.8 | 91.7 | 88.8 | 88.5 | 69.0 | 54.0 | 40.3 | 91.8 |
| 1873.. | 42.3 | 45.0 | 49.3 | 66.2 | 82.0 | 90.0 | 92.4 | 86.2 | 85.8 | 70.5 | 52.0 | 57.7 | 92.4 |
| 1874.. | 52.0 | 49.3 | 57.2 | 63.0 | 86.0 | 93.0 | 90.0 | 84.0 | 85.8 | 66.0 | 60.0 | 49.0 | 93.0 |
| 1875.. | 35.5 | 50.0 | 51.0 | 63.0 | 84.7 | 89.0 | 91.5 | 84.8 | 84.7 | 70.3 | 56.2 | 55.0 | 91.5 |
| 1876.. | 63.0 | 52.3 | 59.0 | 63.3 | 86.0 | 87.7 | 95.0 | 90.0 | 90.0 | 71.1 | 71.7 | 42.0 | 95.0 |
| 1877.. | 43.0 | 50.0 | 52.8 | 75.8 | 84.5 | 88.0 | 89.1 | 87.4 | 85.7 | 75.4 | 66.8 | 55.2 | 89.1 |
| 1878.. | 44.4 | 53.3 | 65.1 | 73.1 | 83.2 | 90.2 | 92.2 | 83.3 | 84.5 | 77.3 | 57.2 | 53.7 | 92.2 |
| 1879.. | 50.1 | 43.2 | 51.6 | 72.4 | 83.0 | 90.3 | 91.4 | 90.6 | 85.6 | 82.6 | 68.2 | 54.5 | 91.4 |
| 1880.. | 47.9 | 57.6 | 59.8 | 77.7 | 93.0 | 91.1 | 90.5 | 88.0 | 90.0 | 71.4 | 59.2 | 38.9 | 93.0 |
| 1881.. | 38.0 | 47.0 | 50.8 | 78.4 | 89.0 | 80.0 | 87.2 | 90.8 | 94.0 | 86.2 | 66.7 | 61.4 | 94.0 |
| 1882.. | 45.0 | 47.4 | 56.2 | 68.0 | 78.0 | 90.0 | 92.1 | 93.0 | 87.7 | 73.8 | 66.1 | 48.0 | 93.0 |
| 1883.. | 42.2 | 43.1 | 51.1 | 67.3 | 89.0 | 90.8 | 93.0 | 86.2 | 79.8 | 77.1 | 67.2 | 53.1 | 93.0 |
| 1884.. | 40.1 | 46.0 | 54.0 | 70.3 | 85.2 | 92.5 | 93.0 | 92.4 | 90.0 | 78.2 | 61.0 | 57.4 | 93.0 |
| 1885.. | 57.0 | 39.0 | 50.0 | 83.0 | 85.0 | 89.0 | 93.0 | 87.0 | 81.0 | 80.0 | 70.0 | 65.0 | 93.0 |
| 1886.. | 56.0 | 52.0 | 61.0 | 83.0 | 82.0 | 95.0 | 90.0 | 83.8 | 77.9 | 65.5 | 49.0 | 95.0 | 95.0 |
| 1887.. | 47.2 | 43.8 | 46.0 | 74.4 | 86.5 | 91.0 | 93.6 | 88.0 | 80.0 | 74.4 | 64.8 | 51.0 | 93.6 |
| 1888.. | 41.0 | 49.0 | 49.0 | 84.0 | 80.0 | 94.5 | 85.5 | 87.0 | 76.0 | 66.0 | 71.0 | 56.5 | 94.5 |
| Mean. | 45.5 | 47.9 | 56.3 | 73.0 | 83.2 | 88.6 | 90.7 | 87.2 | 83.2 | 72.9 | 62.1 | 48.9 | 91.9 |

Record of the Minimum Temperature.

From 1838 to 1888, inclusive.

| Year. | Jan. | Feb. | Mar. | April | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Ann'l |
|--------|-------|-------|-------|-------|------|-------|-------|------|-------|------|------|-------|-------|
| 1838.. | 6.0 | -5.5 | 4.0 | 17.0 | 30.0 | 43.0 | 50.0 | 41.0 | 38.0 | 27.0 | 3.0 | -7.0 | -7.0 |
| 1839.. | -13.0 | 0.0 | 4.0 | 22.0 | 27.0 | 40.0 | 49.0 | 44.0 | 34.0 | 22.0 | 11.0 | -2.0 | -13.0 |
| 1840.. | -21.0 | -14.0 | 7.0 | 19.0 | 34.0 | 44.0 | 50.0 | 50.0 | 36.0 | 23.0 | 18.0 | -2.0 | -21.0 |
| 1841.. | -17.0 | -6.0 | 8.0 | 21.0 | 29.0 | 43.0 | 42.0 | 42.0 | 46.0 | 20.0 | 13.0 | 5.0 | -17.0 |
| 1842.. | -10.0 | 5.0 | 13.0 | 17.0 | 30.0 | 34.0 | 49.0 | 45.0 | 30.0 | 26.0 | 13.0 | -2.0 | -10.0 |
| 1843.. | -8.0 | -15.0 | 7.0 | 15.0 | 35.0 | 34.0 | 47.0 | 53.0 | 30.0 | 28.0 | 17.0 | 2.0 | -15.0 |
| 1844.. | -22.0 | -10.0 | 5.0 | 14.0 | 33.0 | 42.0 | 40.0 | 40.0 | 26.0 | 25.0 | 3.0 | -5.0 | -22.0 |
| 1845.. | 0.0 | -3.0 | 8.0 | 24.0 | 30.0 | 41.0 | 46.0 | 42.0 | 32.0 | 17.0 | 12.0 | -10.0 | -10.0 |
| 1846.. | -1.0 | -6.0 | 2.0 | 22.0 | 32.0 | 41.0 | 44.0 | 47.0 | 37.0 | 25.0 | 20.0 | 1.0 | -6.0 |
| 1847.. | 4.0 | -8.0 | 9.0 | 5.0 | 34.0 | 42.0 | 46.0 | 48.0 | 35.0 | 15.0 | 5.0 | 3.0 | -8.0 |
| 1848.. | -12.0 | -2.0 | 4.0 | 25.0 | 32.0 | 39.0 | 49.0 | 44.0 | 31.0 | 28.0 | 11.0 | -3.0 | -12.0 |
| 1849.. | -8.0 | -10.0 | 12.0 | 21.0 | 32.0 | 39.0 | 45.0 | 50.0 | 37.0 | 29.0 | 25.0 | 3.0 | -10.0 |
| 1850.. | -2.0 | -11.0 | 8.0 | 19.0 | 31.0 | 44.0 | 48.0 | 44.0 | 32.0 | 23.0 | 16.0 | -15.0 | -15.0 |
| 1851.. | -5.0 | -8.0 | 12.0 | 24.0 | 30.0 | 41.0 | 49.0 | 39.0 | 29.0 | 31.0 | 13.0 | -15.0 | -15.0 |
| 1852.. | -15.0 | -3.4 | 0.3 | 23.3 | 38.5 | 43.9 | 55.0 | 48.9 | 33.0 | 24.3 | 15.0 | 6.1 | -15.0 |
| 1853.. | -2.5 | 0.5 | 7.6 | 27.4 | 31.8 | 39.0 | 54.0 | 45.9 | 37.0 | 24.9 | 13.8 | 7.2 | -2.5 |
| 1854.. | -9.6 | -4.8 | 14.0 | 23.7 | 34.0 | 39.8 | 57.7 | 50.8 | 33.8 | 27.0 | 14.0 | -9.0 | -9.6 |
| 1855.. | 10.7 | -16.0 | 7.8 | 17.0 | 41.5 | 48.0 | 57.2 | 44.7 | 33.0 | 30.2 | 15.0 | 7.0 | -16.0 |
| 1856.. | -7.5 | -11.0 | -9.0 | 16.5 | 38.2 | 48.0 | 55.9 | 48.2 | 41.8 | 25.0 | 18.0 | -7.0 | -11.0 |
| 1857.. | -18.2 | -2.7 | 7.0 | 14.3 | 39.8 | 49.0 | 55.5 | 53.6 | 32.0 | 25.0 | 13.0 | 2.2 | -18.2 |
| 1858.. | 0.0 | -5.0 | -8.0 | 28.5 | 40.3 | 51.0 | 58.5 | 58.8 | 37.0 | 31.5 | 14.6 | 0.0 | -8.0 |
| 1859.. | -19.4 | 2.8 | 3.5 | 28.7 | 43.9 | 45.0 | 53.0 | 47.4 | 41.0 | 24.8 | 24.0 | -8.5 | -19.4 |
| 1860.. | -8.0 | -7.2 | 22.8 | 23.1 | 38.9 | 52.0 | 53.0 | 49.1 | 32.0 | 28.0 | 15.0 | -7.0 | -8.0 |
| 1861.. | -17.0 | -20.0 | 5.5 | 18.2 | 33.0 | 51.0 | 56.7 | 48.5 | 41.6 | 25.0 | 17.0 | -6.5 | -20.0 |
| 1862.. | 0.0 | -2.0 | 13.8 | 24.3 | 44.0 | 49.5 | 51.9 | 48.0 | 39.0 | 26.0 | 18.0 | -1.3 | -2.0 |
| 1863.. | 5.0 | -9.0 | -6.0 | 25.0 | 38.3 | 51.0 | 55.3 | 48.7 | 32.0 | 21.0 | 18.0 | 3.2 | -9.0 |
| 1864.. | -1.5 | -4.3 | 15.0 | 31.8 | 40.0 | 47.3 | 53.9 | 54.8 | 41.0 | 28.5 | 10.8 | 18.0 | -4.3 |
| 1865.. | -4.5 | -1.0 | 13.0 | 33.0 | 42.8 | 55.9 | 54.8 | 47.5 | 35.0 | 24.2 | 18.5 | 6.8 | -4.5 |
| 1866.. | -14.5 | -1.5 | 11.5 | 30.0 | 40.0 | 48.0 | 55.0 | 48.0 | 35.5 | 26.5 | 16.8 | -3.8 | -14.5 |
| 1867.. | -5.0 | 8.0 | 8.0 | 29.0 | 36.0 | 54.0 | 55.3 | 48.3 | 39.0 | 27.0 | 17.5 | -3.0 | -5.0 |
| 1868.. | 0.0 | -18.3 | -7.3 | 23.0 | 36.0 | 51.8 | 61.0 | 51.0 | 36.2 | 19.2 | 23.8 | -5.0 | -18.3 |
| 1869.. | 3.0 | -1.0 | -9.0 | 26.7 | 35.2 | 47.4 | 53.5 | 50.0 | 36.3 | 26.8 | 16.9 | -7.5 | -9.0 |
| 1870.. | 5.0 | 6.2 | 6.5 | 35.0 | 42.8 | 53.5 | 54.5 | 47.0 | 40.0 | 26.0 | 24.7 | 1.0 | 1.0 |
| 1871.. | -5.5 | -9.5 | 24.8 | 27.0 | 41.0 | 51.8 | 54.0 | 50.0 | 32.0 | 24.3 | 7.0 | -6.5 | -9.5 |
| 1872.. | 2.5 | -2.5 | -4.8 | 29.0 | 43.7 | 48.7 | 59.1 | 52.9 | 39.5 | 29.9 | 10.0 | -8.0 | -2.0 |
| 1873.. | -22.0 | -2.5 | 1.8 | 33.5 | 39.0 | 50.6 | 56.1 | 49.1 | 36.2 | 27.0 | 6.5 | 7.0 | -22.0 |
| 1874.. | 1.2 | -5.0 | 9.7 | 18.7 | 39.0 | 51.3 | 38.0 | 46.3 | 39.0 | 28.5 | 16.0 | 0.0 | -5.0 |
| 1875.. | -8.2 | -4.0 | 0.0 | 22.5 | 39.8 | 48.5 | 53.8 | 32.0 | 32.5 | 26.0 | -1.0 | -9.0 | -9.0 |
| 1876.. | 2.8 | -1.0 | 4.5 | 28.0 | 39.0 | 47.0 | 52.5 | 49.0 | 41.2 | 23.0 | 18.9 | -1.0 | -1.0 |
| 1877.. | -3.5 | 8.5 | 10.0 | 32.5 | 40.0 | 54.7 | 58.1 | 54.8 | 39.0 | 25.3 | 19.4 | 13.0 | -3.5 |
| 1878.. | 12.5 | -3.2 | 13.2 | 37.0 | 40.5 | 46.4 | 55.2 | 49.9 | 37.0 | 27.0 | 19.8 | 11.7 | -12.5 |
| 1879.. | -4.5 | 1.0 | 7.0 | 32.7 | 40.0 | 49.0 | 56.7 | 53.2 | 30.4 | 20.8 | 7.7 | -6.0 | -6.0 |
| 1880.. | 2.0 | -11.5 | 13.7 | 26.2 | 37.0 | 51.0 | 54.0 | 45.7 | 39.1 | 22.9 | 9.5 | -5.0 | -11.5 |
| 1881.. | -12.4 | -7.0 | 24.4 | 22.1 | 37.0 | 47.7 | 59.2 | 56.7 | 49.0 | 29.0 | 14.0 | 8.5 | -12.4 |
| 1882.. | -15.0 | -6.0 | 17.4 | 23.7 | 39.1 | 52.2 | 56.3 | 49.7 | 43.7 | 32.2 | 12.0 | 0.0 | -15.0 |
| 1883.. | -2.5 | -1.3 | 3.0 | 23.5 | 43.0 | 53.7 | 55.0 | 43.4 | 36.2 | 23.2 | 18.0 | -12.8 | -12.8 |
| 1884.. | -8.0 | 5.1 | 0.0 | 31.2 | 37.6 | 50.0 | 57.1 | 48.8 | 39.0 | 26.5 | 19.8 | -10.0 | -10.0 |
| 1885.. | -18.0 | -15.0 | -11.0 | 19.0 | 21.0 | 35.0 | 41.0 | 34.0 | 27.0 | 24.0 | 11.0 | 6.0 | -18.0 |
| 1886.. | -22.0 | -11.0 | -1.0 | 21.0 | 29.0 | 40.0 | 41.0 | 39.0 | 31.6 | 17.0 | 15.9 | 0.8 | -22.0 |
| 1887.. | -22.2 | -3.8 | -2.4 | 17.1 | 33.2 | 38.5 | 56.0 | 42.5 | 29.5 | 17.0 | 11.0 | -6.0 | -22.2 |
| 1888.. | -21.5 | -19.0 | -3.0 | 15.0 | 26.0 | 38.0 | 46.0 | 42.0 | 25.0 | 26.0 | 5.7 | 3.5 | -21.5 |
| Mean. | -7.4 | -5.3 | 6.0 | 23.6 | 36.1 | 45.9 | 52.1 | 47.3 | 35.6 | 25.1 | 14.2 | -1.3 | -11.7 |

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